

**BEFORE THE BOARD OF ZONING ADJUSTMENT
OF THE DISTRICT OF COLUMBIA**

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Application of

The Howard University

STATEMENT OF THE APPLICANT

I. NATURE OF RELIEF SOUGHT

The Howard University (the "Applicant") submits this application, pursuant to 11 DCMR sections 3103.2 for a variance from the parking requirements of section 2101.1, for a new Interdisciplinary Science Building (the "Project" or "HUISB") on the campus of Howard University at premises address of 2201 Georgia Avenue, NW (Square 3065, Lot 833) (the "Property" or "Site").

II. JURISDICTION OF THE BOARD

The Board of Zoning Adjustment has jurisdiction to grant the requested variance relief pursuant to section 3103.2 of the Zoning Regulations.

III. EXHIBITS IN SUPPORT OF THE APPLICATION

This application includes the following additional materials:

- Exhibit A: Surveyor's Plat showing the Property and proposed improvements.
- Exhibit B: Zoning Map showing the Property outlined in red.
- Exhibit C: Zoning Commission Order 11-15 approving Howard University Campus Plan.
- Exhibit D: Map and related materials excerpted from Howard University Campus Plan indicating development plans for the Property.
- Exhibit E: Project Plans showing proposed improvements on the Property.
- Exhibit F: DC Department of Transportation Report in Z.C. No. 11-15.
- Exhibit G: Excerpt from Property Geotechnical Report.

BOARD OF ZONING ADJUSTMENT
District of Columbia
CASE NO. 18508
EXHIBIT NO. 3
EXHIBIT NO.3

IV. BACKGROUND OF THE CASE

A. Site and Vicinity Characteristics

1. The Property

The property which is the subject of this application is located on the northeast corner of the intersection of Georgia Avenue and W Street NW. (Square 3065, Lot 833). As shown on the attached building plat issued by the District of Columbia Office of the Surveyor, it is roughly trapezoidal in shape with approximately 156 feet of frontage along Georgia Avenue, N.W. and a lot area of approximately 22,975 square feet (Exhibit A). The Property is zoned C-M-3 and is located within the boundaries of Advisory Neighborhood Commission 1B (Exhibit B). As indicated previously, it is also located within the boundaries of Howard University's Central Campus.

The Property is currently used by the University as a surface parking lot. Previously it was a gas station site that was purchased by the University in 2003.

2. Square 3065 and Vicinity

Square 3065 is bounded by Bryant Street to the north, 6th Street to the east, W Street to the south, and Georgia Avenue to the west. It is bordered by University owned properties devoted to various academic and support uses. To the immediate north of the Property is a commercial building owned by the University known as the Howard Center. It was originally built as a hotel called the Harambee House in 1975.

To the immediate east of the Property is a surface parking lot and the offices of the University's Human Genome Project, also owned by the University. Further east is the School of Nursing and Allied Health Sciences. To the west of the Property across Georgia Avenue is vacant land owned by the University, which is paved for University parking. These properties

are zoned CR. Immediately south of the Property, across W Street, N.W., is the Medical Arts Building which houses the Howard Student Health Center. The Property is located approximately four blocks from the Shaw-Howard University Metrorail Station.

3. Zoning History of the Property and Vicinity

The Commission recently approved a new Campus Plan for the University in Case No. 11-15. (A copy of the Z.C. Order 11-15 approving the campus plan is attached hereto as Exhibit C.) The approved Campus Plan included the proposed Project¹ and thoroughly vetted all parking and transportation issues associated with additional University growth over the next decade. (See Exhibit D for excerpts from the Campus Plan regarding the Project and Exhibit E for the Project schematic plans.) In general, the Campus Plan per the recommendation of the D.C. Department of Transportation (“DDOT”) contemplates a net reduction in parking facilities on the Campus, and a shift towards greater reliance on alternative modes of transportation, including mass transit, bicycles, and the Howard University shuttle bus. Additional Transportation Demand Management (“TDM”) measures were proposed by the University in consultation with DDOT in a comprehensive TDM plan designed to encourage students, faculty, and staff to reduce the number of drive-alone automobile trips to the campus. (See Exhibit F for a copy of the DDOT report in Campus Plan case.) The University is implementing these measures as agreed.

¹ While the Property is located within the boundaries of the University’s Campus Plan, further processing of this Project pursuant to Section 210 is not required because university use is permitted as a matter of right in the applicable C-M-3 zone. Further, Condition No. 4 of ZC Order No. 11-15, which approved the University’s Campus Plan, specifies that only new University development located in residential, special purpose or mixed use (commercial-residential) zones within the campus plan boundaries are subject to special exception further processing

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B. Nature of Variance Request

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The Applicant proposes to construct a new 90 foot academic building to be called Interdisciplinary Research Building (“HUIRB”). (See Exhibit E; Schematic Project Plans.) The new HUIRB is intended to provide the University with a research facility that supports the highest level of technology needed to develop new scientific endeavors as well as the latest in interdisciplinary science research and future medical discoveries. The program for the new HUIRB focuses on nanoscience, natural products chemistry, molecular imaging, microbiology studies along with other related scientific fields. To conduct this type of research, the HUIRB facility features specialized spaces for the scientific equipment and the scientific process methodologies used by the researchers. The building will total approximately 80,670 square feet of gross floor area on the 22,975 square foot lot, resulting in a building density of approximately 3.6 FAR, substantially less than the 6.0 FAR allowed in the C-M-3 District.

Pursuant to section 2101.1 of the Zoning Regulations, approximately 41 off-street parking spaces would normally be required to be provided given the proposed occupancy and size of the Project and the Property’s C-M-3 zoning.² However, the Project is not intended for occupancy by new (additional) University faculty and students. Rather, the purpose of the Project is to provide the specialized space needed for existing faculty and students to collaborate and conduct the types of cutting edge research indicated above. The Project, therefore, will not

² Section 2101.1 provides the following parking requirement for Colleges and institutions of higher learning in CM zones Two spaces for every 3 teachers plus either 1 for every 10 classroom seats or 1 for each 10 auditorium seats or 1 for each 12 stadium seats whichever is greater. The proposed project includes offices for 40 professors and includes a multi-purpose space which can seat up to 150 people for auditorium use except as provided in section 2106 Section 2106 provides as follows For a college or university use, if a campus plan has been approved by the Zoning Commission or the Board of Zoning Adjustment for the college or university, parking shall be provided as set forth in the approved campus plan. In this case, the Site is located within the boundaries of the University’s approved campus plan but the Project is not subject to further processing. Further, the campus plan does not specifically provide a recommendation for parking for the Project – it merely indicates that the site is a potential location for additional campus parking

create any additional demand for parking on the campus. Given the established campus-wide planning objectives to reduce parking as well as certain site constraints that make the development of underground parking on the site very difficult and costly, the University is seeking a variance from the requirements of Chapter 21 of the Zoning Regulations to provide parking within the Project.

V. THE APPLICATION MEETS THE REQUIREMENTS FOR VARIANCE RELIEF FROM THE ZONING REGULATIONS

The burden of proof for variance relief is well established. The Applicant must demonstrate that its property is affected by an exceptional or extraordinary situation or condition, that will cause the strict application of the Zoning Regulations to result in a practical difficulty to applicant, and that the granting of the variance will not cause substantial detriment to the public good nor substantially impair the intent, purpose or integrity of the Zone Plan. *Palmer v. District of Columbia Board of Zoning Adjustment*, 287 A.2d 535, 541 (1972). As set forth below, the Application meets this three-part test for area variance relief as established in section 3103.2.

A. The Property is Affected by an Exceptional or Extraordinary Situation or Condition

The Property has several unusual conditions which give rise to an exceptional situation. First, the Site is relatively small and it suffers from a high water table which would add substantial cost to excavating and constructing underground parking. Second, it is located within the boundaries of a campus which is subject to an approved campus plan that mandates a reduction in campus-wide parking facilities and the implementation of TDM measures designed to discourage single occupancy automobile trips to the campus. Further, the proposed Project occupants will be existing faculty and students who have already been accounted for in overall campus parking demands so no new parking demands will be generated as a result of the Project. Finally, the proposed improvements require very specialized building specifications which

adversely impact the University's ability to provide underground parking. These specifications are discussed in detail below

B. The Strict Application of the Zoning Regulations Would Result in a Practical Difficulty

In order to qualify for an area variance, a property owner must demonstrate peculiar and exceptional practical difficulties which would result from strict compliance with the applicable regulation. Furthermore, these difficulties must be related to a property's exceptional circumstances.

In this case, strict adherence to the parking requirements would require that the Project provide 41 parking spaces on-site. However, given the site's high water table and the special requirements of this particular research facility, no parking can reasonably be provided underground without excessive cost and without compromising the building's research functions. The Project's special requirements are detailed as follows along with an explanation of their impact on the Applicant's ability to provide on-site parking.

- The Property geotechnical report indicates ground water is located only 18 feet below grade. (See excerpts from the Property geotechnical report attached hereto as Exhibit G.) Providing numerous levels of underground parking could require costly special construction techniques to compensate for the high water adding substantial additional cost to the Project for parking which is unnecessary.³
- Vibration Criteria: The new HUIRB will be designed to meet VC-A, VC-E and NIST-A vibration criteria. The latter two are levels of vibration that allow the use of specialized imaging machines such as Transmission Electron Microscope (TEM), Scanning Electron Microscope (SEM) and Positron Emission Tomography Scanner (PET Scanner). Equipment of this nature is highly sensitive and requires a high level of vibration mitigation within the building in order to function properly. Most of this equipment would be located in the basement level and on the second floor of the building within clean room space. The building will be designed as a reinforced concrete structure with a mat slab foundation to increase the overall mass of the building, which helps control vibration. Another means to mitigate vibration is to

³ As a precedent, we note that the BZA previously approved a parking variance for the adjacent Howard Inn property due to the high water table (BZA No. 11790)

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eliminate its source. Cars entering below grade parking in the new building would create an excessive amount of vibration that would be very difficult, if not impossible, to mitigate through structural design. Therefore eliminating the parking removes a major source of vibration.

- The proposed size of the Project footprint is less than what is permitted for the Site. The design intent was to create a more generous pedestrian space along Georgia Avenue and W Street. The building's small footprint would create inefficiencies in a parking layout within the lower levels given drive aisles and parking space size and configuration requirements. Further, the column grid for the Project is based on standard design specifications for laboratory buildings. The typical structural grid for laboratory spaces is 22 feet by 30 to 33 feet, which does not align with an efficient parking layout.
- The Mechanical Air Handling Systems for the HUIRB will require critical design parameters to meet programmatic functions that include temperature control, airborne particulate control (the HUIRB will have a clean room suite on the second floor), humidity control and various levels of pressurization. Below grade parking requires additional air handling systems per code which to exhaust auto fumes. Passing this exhaust through the building would be incompatible with the Project's specialized program requiring a separate exhaust system located outside the building. Such a system would need to exhaust closer to the street level. This could impact the clean room and is not a viable solution as it relates to protection of pedestrian areas. Eliminating the below grade parking would resolve this issue.

For all of these reasons, a strict interpretation of section 2101.1 of the Zoning Regulations

would cause a practical difficulty to the Applicant and justify variance relief.

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Variance Relief Can Be Granted Without Substantial Detriment to the Public Good and Without Impairing the Intent, Purpose and Integrity of the Zone Plan

The Application can be approved by the Board with no substantial detriment to the public good and with no impairment to the intent, purpose and integrity of the Zone Plan, as set forth below.

1. Public Good

The grant of variance relief to allow the development of the Project without providing parking spaces on-site will not create any detriment to the public good. The Project will not create any additional demand for parking because the faculty and students who will occupy the

building are already on campus. Further, the Property is located approximately four blocks from a Metrorail station and is also well served by MetroBus and the Howard University shuttle bus. Finally, the Applicant has committed to Transportation Demand Management (TDM) measures that are intended to reduce both the volume of, and demand for parking on-site and the campus as a whole.

2. Zone Plan

The grant of variance relief in the present case will likewise not impair the District's zone plan. Aside from the fact that the Project is not likely to generate any additional demand for parking, we note that the current public policy with regard to parking on the University campus as well as in the District of Columbia as a whole is to lower parking requirements and to discourage automobile traffic.

For all these reasons, the Applicant satisfies the requirements of section 3103.2 of the Zoning Regulations for variance relief from the parking requirements set forth in section 2101 1.

VI. CONCLUSION

For the reasons stated above, the requested relief meets the applicable standards of the Zoning Regulations and can be granted without substantially impairing the intent, purpose and integrity of the Zoning Regulations. The Applicant therefore requests that the Board grant this application

Respectfully submitted,

SAUL EWING LLP

By Cynthia A. Giordano/jmd
Cynthia A. Giordano
1919 Pennsylvania Avenue, NW
Suite 550
Washington, DC 20006
(202) 333-8800

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EXHIBIT A

Survey Book No. 1002 Page No. 430

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District of Columbia Government
Office of the Surveyor

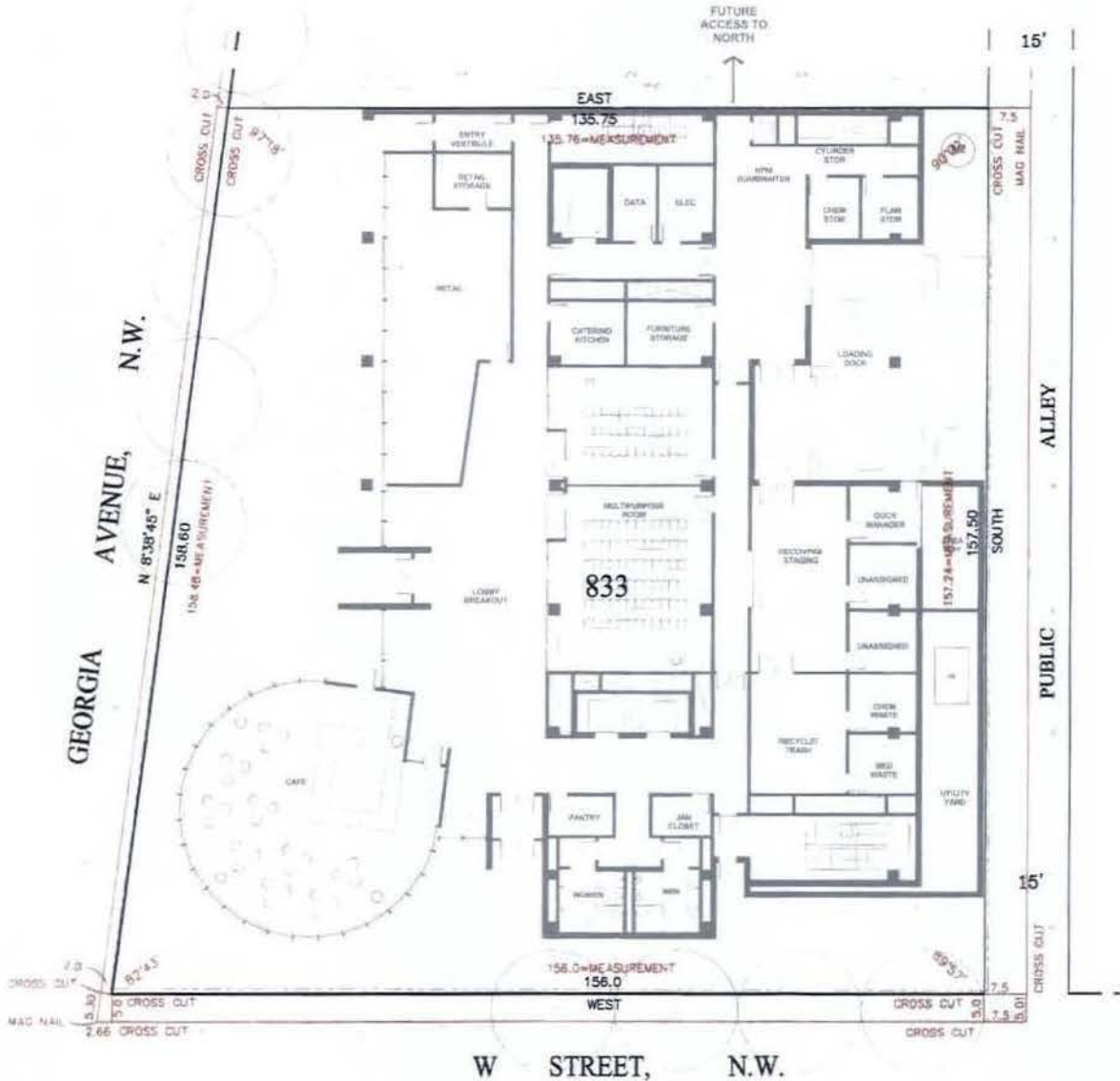
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Plat of Survey of Lot 833 to Mark in outline and show
actual angles and measurements.

Square 3065

Scale: 1 inch = 20 feet

S.O. Receipt No. SO-04511



OFFICE OF THE SURVEYOR, D.C.

This plat is accepted for recordation in accordance with Chapter 28 of Title 10 DCMR.

S.O. SEAL

RLS SEAL

Date July 13, 2012 SURVEYOR, D.C.

RECORDED AT: 12:05 PM on July 13, 2012

RECORDED IN SURVEY BOOK 1002 PAGE 430

REGISTERED LAND SURVEYOR CERTIFICATION

I certify that the survey shown hereon was made by me or under my direction in accordance with Chapter 28 of Title 10 DCMR.

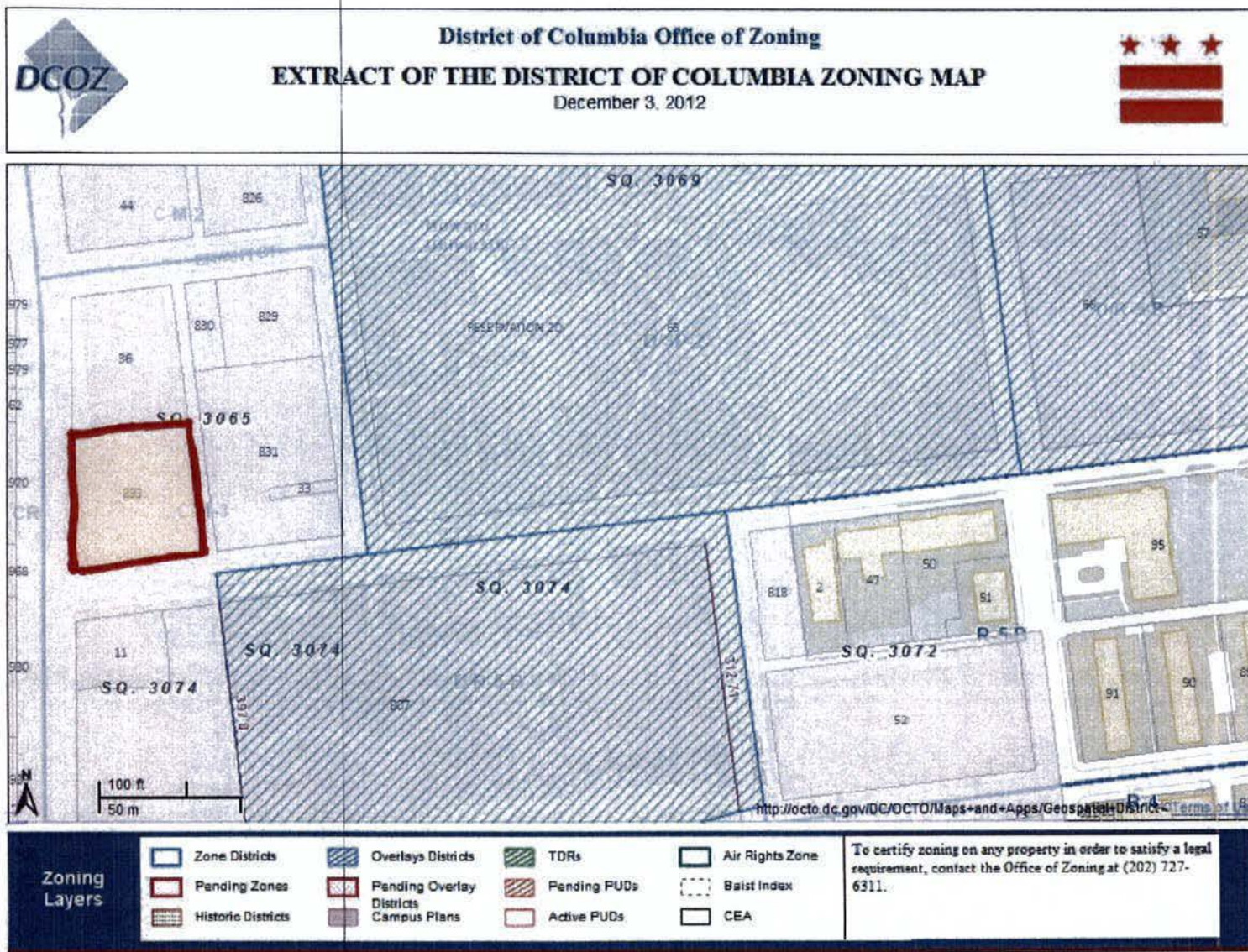
Date 6/27/2012 Signature Joseph E. Snider

NAME OF RLS: Joseph E. Snider

D.C. Registration Number: 2003-05

Business Address and Telephone No.:

Snider & Associates, Inc.
20270 Goldenrod Lane #110
Germantown, MD 20876



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EXHIBIT C

GOVERNMENT OF THE DISTRICT OF COLUMBIA Zoning Commission



ZONING COMMISSION FOR THE DISTRICT OF COLUMBIA ZONING COMMISSION ORDER NO. 11-15

Z.C. Case No. 11-15
(Howard University – 2011 Campus Plan)
January 9, 2012

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This Decision and Order arises out of an application filed in Z.C. Case No. 11-15 of Howard University ("University"), pursuant to 11 DCMR §§ 3108.1, for special exception review and approval of its 2011 Central Campus Plan for the Howard University Campus under §§ 210 and 507 of the Zoning Regulations.

The campus is bounded generally by Florida Avenue, N.W. to the south, 4th Street, N.W. and the McMillan Reservoir to the east, Hobart Street, N.W. to the north, and Sherman Avenue, N.W. to the west. It is located in the R-4, D/R-5-A, D/R-5-B, R-5-E, C-2-A, C-R, D/SP-2, C-M-2 and C-M-3 zones in Square 330, Lot 800; Square 2872, Lots 266 to 271, 275, 803, 820, 822-824; Square 2873, Lots 785, 786, 787, 788, 789, 790, 791, 792, 796, 797, 869, 872, 873, 1101; Square 2875, Lots 159, 162-167, 284, 302; 331-333, 976, 982, 1108, 2004, 2011, 2033; Square 2877, Lots 62, 811, 930, 933, 934, 945, 968, 972, 970, 977, 979, 1023; Square 2882, Lots 742 to 749, 756 to 769, 950, 951, 952, 953, 1037 to 1039; Square 2885, Lot 889; Square 3055, Lots 15, 821; Square 3057, Lot 92; Square 3058, Lots 827, 828, 829, 833-835; Square 3060, Lots 41, 830, 839; Square 3063, Lot 801; Square 3064, Lots 44, 45, 826, 837; Square 3065, Lots 36, 829, 830, 831; 833; Square 3068, Lot 30; Square 3069, Lots 65, 66; Square 3072, Lots 52, 818; Square 3074, Lot 11; Square 3075, Lot 807; Square 3080, Lot 73; Square 3084, Lot 830; Square 3088, Lot 835; and Square 3094, Lot 800. It is surrounded by the neighborhoods of Shaw, LeDroit Park, Bloomingdale, Pleasant Plains, Park View, and Columbia Heights.

In accordance with 11 DCMR §§ 210 and 3035, this case has been heard by the Zoning Commission under the rules of the Board of Zoning Adjustment, at Chapter 31 of 11 DCMR.

HEARING DATE: December 5, 2011
DECISION DATE: January 9, 2012

FINDINGS OF FACT

1. The proposed Campus Plan applies to Howard University's Central Campus. The Central Campus is centered along Georgia Avenue and Howard Place with Hobart Street to the north; 4th Street to the east; U and V Streets to the south; and Florida and Sherman

441 4th Street, N.W., Suite 200-S, Washington, D.C. 20001

Telephone: (202) 727-6311

Facsimile (202) 727-6072

E-Mail dcoz@dc.gov

Web Site www.dcoz.dc.gov

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Avenues to the east. The campus boundary also extends to the following additional properties: vacant buildings along Sherman Avenue and north of Barry Place; parking lot near 9th and V Streets; Carver Hall at 2nd and Elm Streets, N.W.; Slowe Hall at 3rd and Elm Streets, N.W.; and University Service Center at 10th and Florida Avenue.

2. The University's previous Central Campus Plan was approved by BZA Order No. 16330 on March 29, 1999 subject to conditions, including the following
 - A cap on student enrollment at 12,000, faculty at 1,777, staff at 3,494, and hospital staff at 2,185;
 - The University should work with the community and make all reasonable efforts to seek the implementation of the recommended traffic mitigation measures if the measures are deemed desirable by a consensus of the affected community groups,
 - The University shall endeavor, consistent with its overall academic mission, to encourage commercial development on lower Georgia Avenue; and
 - Establish a Howard University Advisory Council (HUAC) composed of representatives of the University, affected Advisory Neighborhood Commissions (including but not limited to ANC 1B and ANC 5C), representatives selected by civic associations surrounding the campus (including but not limited to Pleasant Plains, Bloomingdale, and LeDroit Park), interested student organizations and other interested community groups. The Howard University Advisory Council shall meet on a regular basis or a minimum of four times annually, to discuss the effects of University activities on the surrounding community and other issues of mutual concern.
3. This Plan expired on March 29, 1999. The University requested and the Zoning Commission approved an 18-month extension of the Plan on January 12, 2009, pursuant to Z.C. Order No. 08-32 and a one year extension on May 24, 2010 pursuant to Z.C. Order No. 08-32B, to allow the University's new administration to have input on the plan.
4. The proposed Campus Plan ("2011 Plan") is an update of the previous plan and a program to upgrade and expand campus facilities including academic, residential, and recreational buildings. The 2011 Plan proposes over 2,316,584 gross square feet of new construction, as well as major renovations and additions to existing buildings in three phases over the next seven years. The 2011 Plan proposes an increase in the floor area ratio ("FAR") of the campus from the existing 1.3 to 1.75, but no change in the existing enrollment benchmark of 12,000 students.

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5. The boundaries of the Central Campus are modified with the 2011 Plan. The University is adding a vacant parking lot, consisting of Lots 266-271, 803, 820, and 822-824 in Square 2872; Lot 788 in Square 2873; and Lot 1108 in Square 2875. Certain lots in Squares 2873, 2875, and 2877 are no longer owned by the University and have been deleted.
6. The proposed 2011 Plan is based upon the following key planning principles:
 - support for the University's academic mission;
 - preservation and protection of the University's historic legacy;
 - fostering community engagement;
 - implementation of good urban design;
 - enhancing connectivity and walkability;
 - improving the public realm,
 - developing the campus edge; and
 - embracing sustainability.
7. The proposed 2011 Plan includes several projects that would expand academic, residential, athletic, commercial, and student life facilities on the campus. The majority of the proposed building expansion will take place on the eastern portion of the campus (the core area) and not directly adjacent to neighborhood residences.
8. The University's plan for the new and expanded building projects is phased as follows:

Phase 1 (1-3 years) includes a new interdisciplinary science and engineering building Computational Biomedical Science, two new Residential Halls as well as a residence for upperclassmen, a wellness and recreation center, and retail;

Phase 2 (3-5 years) includes renovation of the Blackburn Center, School of Communications, and Retail, Academic/Support/Public Safety, Nursing, Allied Health, Pharmacy, Nanotechnology, Upperclassman Residence, Retail, and the Miner Building Renovation;

Phase 3 (5-7 years) includes Health Sciences, Health Care and Retail, an Intercollegiate Athletics Complex and Retail, Graduate and Work Force Housing, Upperclassman Residences, and a teaching and learning building; and

Future Phase includes academic, residential, retail, institutional infill, academic/research, and additional space.
9. The University's proposed development plan does not address the current and future status of the Howard University Hospital. The hospital has its own unique operations and

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impacts and would need to be fully analyzed to assess its impacts on the neighborhood due to traffic. The Office of Planning ("OP") therefore recommended that a development plan for the hospital be provided as an amendment to the 2011 Plan should expansion or external alterations be proposed.

10. The 2011 Plan proposes to increase the University's capacity to house students on the campus. The University submitted under separate cover further processing applications for two new dormitories to be constructed for occupancy for the 2014-2015 academic year.
11. The University's student housing plan targets accommodating between 60% and 70% of the total eligible (full-time) student population, as compared to the existing capacity to house approximately 40% of eligible students. The plan is designed to address several core issues with the existing inventory, including:
 - a general lack of system capacity to house the targeted proportion of the student population;
 - the poor location of existing residence halls relative to core campus functions;
 - the old age of many of the existing facilities and the infrastructure that serves them; and
 - disparities between housing types, price points, and access to housing within the system.
12. To accomplish its student housing goals, the University is committed to the construction of several new residence halls, the renovation of certain existing residence halls, and the removal of outmoded or sub-par facilities from the housing inventory. Properties that are tentatively scheduled for removal from the actively occupied inventory include George W. Carver Hall, George W. Cook Hall, Charles R. Drew Hall, Meridian Hill Hall, and Lucy D. Slowe Hall.
13. In Phase I of the Campus Plan, the University proposes to construct over 1,300 new beds to replace facilities that are deemed sub-par. In subsequent phases, over 1,500 more beds are proposed to be constructed to enhance system capacity to meet the targeted 60% to 70% on-campus residency rate. Additionally, approximately 100 beds will be removed from the system through a series of interior renovations focused upon enhancing housing quality through de-densification of living conditions.
14. Key landscape recommendations included in the 2011 Plan include
 - renovating the Main Quad and Lower Quads;
 - developing a new gateway at Howard Place and Georgia Avenue;
 - improving streetscapes throughout the campus boundaries;

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- improving the East-West pedestrian connection at Howard Place across Georgia Avenue to Sherman Avenue,
 - renovating the rooftop of the Undergraduate Library with a new green roof garden, arbor and seating areas; and
 - creating a new Residential Quad.
15. The Commission provided proper and timely notice of public hearing on this application by publication in the *D C Register* and by mail to the Applicant, Advisory Neighborhood Commissions (“ANC”) 1B and 5C, and to owners of property within 200 feet of the property that is the subject of this application. The application was also referred to OP for review and report.
16. The Central Campus is located within the boundaries of ANC 1B. ANC 1B, which is automatically a party in this proceeding, submitted a written statement in support of the application. The application is also of interest to ANC 5C, whose boundary is located across from the Howard campus. ANC 5C also submitted a written statement in support of the application.
17. OP submitted a written report and recommended approval of the University’s application, subject to the following conditions:
- (a) The overall maximum student enrollment shall be 12,000 students, including any student taking at least one class or course at any area covered by the 2011 Plan;
 - (b) The 2011 Plan, as submitted, shall be valid for a period of 15 years;
 - (c) The anticipated reuse of the vacated student housing buildings in the community be identified;
 - (d) A campus plan amendment and/or further processing application be submitted should the Howard University Hospital propose any structural changes or expansions;
 - (e) Provide university student housing for at least 70% of the total undergraduate enrollment, and
 - (f) Submission of the existing, proposed and maximum density calculations for the entire campus.
18. The D.C. Department of Transportation (“DDOT”) submitted a written memorandum indicating support for the application and listing several areas in which the University

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could improve or expand upon previous improvements to transportation within and around the Central Campus boundaries.

19. In response to DDOT's recommendations, the University agreed to the following:
- (a) Coordinate closely with DDOT regarding the roadway design of Georgia Avenue to ensure successful improvement of transit facilities, changes to curbside parking, and minimization of vehicular delay on the corridor,
 - (b) Install a new traffic signal at the intersection of College and 4th Streets, N.W. prior to the issuance of a certificate of occupancy for the new student residences along 4th Street;
 - (c) Fund at least one Bikehare station on the central campus in order to help meet the demand for the bicycle transportation and to connect with new activity centers and residential nodes where Bikeshare bicycles and docks have already been installed,
 - (d) Implement a Transportation Demand Management ("TDM") Plan to encourage students, faculty and staff to reduce the number of drive-alone trips to the central campus and increase their use of transit and other alternative modes of transportation. The TDM Plan includes.
 - (1) Maintenance of bus stops during construction, should any construction activity necessitate bus stop relocation,
 - (2) An increase in the amount of short-term and long-term bicycle parking on campus as described in the TDM Plan submitted to DDOT on November 21, 2011,
 - (3) Offering non-University tenants of new campus plan buildings the option to purchase or lease parking spaces at market rate, instead of including them in the tenancy lease, thus giving them an opportunity to reduce their use of on-site parking,
 - (4) Posting and publication of the final TDM Plan on the University's Parking and Shuttle webpage and in other University media, where commuter benefits and timelines for implementation will be publicized for all faculty staff and students;
 - (5) Identification of a TDM Leader;
 - (6) Installation of at least one transportation information kiosk per year for the first five years of the campus plan implementation;

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- (7) Establishment of weblinks to commuter support websites;
 - (8) Maintenance and improvement of the University shuttle bus service where necessary;
 - (9) Expansion of telecommuting practices and the promotion of flextime schedules where appropriate for faculty and staff,
 - (10) An increase in the price of parking on University parking lots by 100% for all permit holders on lots with occupancy levels of 80% or greater beginning in school year 2012-2013;
 - (11) Encourage an increase in the use of WMATA's SmartBenefits program;
 - (12) Conduct annual modal split surveys and monitoring practices to determine the effectiveness of the TDM measures in reducing the percentage of drive-alone University faculty, staff and students. These will include the establishment of aspirational performance indicators and TDM targets that the University shall use as benchmarks against which to measure progress. The intent is to be able to effectively gauge success in meeting targets. These targets include:
 - By the end of the first five years of the approved plan:
 - A reduction in the faculty and staff drive-alone rates to 50%, and
 - A reduction in the percentage of the overall population (including students) who drive alone to 18%.
 - By the end of the first ten years of the approved plan:
 - A reduction in the faculty and staff drive-alone rates to 40%;
 - A reduction in the percentage of the overall population (including students) who drive alone to 15%; and
 - If annual surveys do not show a reduction in the current drive-alone mode percentage and/or the number of parking permits sold, the University will undertake additional TDM measures beyond those listed above in pursuit of the aspirational targets; and
- (e) Commit to an on-going, regular monitoring and reporting program of campus transportation activity, parking, and progress on TDM targets to DDOT.

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20. The LeDroit Park Civic Association and the Pleasant Plains Civic Association both expressed concerns about University-owned vacant buildings located outside the Campus Plan boundaries, including those that are currently vacant or near vacant, and those that are scheduled to become vacant. The University has addressed each of these concerns as follows:
- The Mary Church Terrell House, 326 "T" Street, N.W., is a National Historic Landmark (as of 1975), and is undergoing restoration activities as funding becomes available. The building is unoccupied. The University indicated that it continues to seek funding to complete the restoration of the building, and the exterior landscaping will be maintained.
 - The Walter Washington Home, 408-410 "T" Street, N.W., is a home of special local significance which the University intends to renovate and stabilize for potential use as a University Guest House. The University indicated that, in the interim, the exterior landscaping will be maintained.
 - 649 Florida Avenue, N.W. is a vacant lot that is fenced in and frequently collects trash. Neighbors have asked, and the University agreed, that the lot be regularly cleaned, and that the University will explore placing some artwork around the perimeter to keep it from being an eyesore.
 - The Effingham Apartments, 2711, 2715, 2719 Georgia Avenue, N.W., are currently vacant. This apartment complex will remain vacant, and the University agreed to maintain the exterior landscaping and keep the hallways well-lit in the evenings.
 - Square 2877, Lot 967 next door to 2009 Eighth Street, N.W. is a fenced in vacant lot which intermittently collects trash. The neighbors have requested, and the University agreed, that the lot shall be regularly cleaned, and that the University will explore placing some artwork around the perimeter to keep it from being an eyesore.
 - Vacant storefronts occur in several places on Howard-owned property along Georgia Avenue (e.g. Wonder Plaza and 2727 Georgia). Neighbors have requested, and the University agreed, that the University will work with the Emergence Community Arts Collective and the Pleasant Plains Workshop to place artwork in the front windows of these facilities so that they stop looking so desolate.
21. The LeDroit Park neighbors asked that since so much construction is expected to ensue in the near term, they would like the University to develop a construction plan with its

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neighbor community institutions that would help minimize the inconveniences that construction can normally bring about. The University agreed to develop construction plans that address these and other concerns of neighbors as they arise around each of the construction projects it sponsors.

22. The LeDroit Park and Pleasant Plains communities, the Georgia Avenue Community Development Task Force, and ANC 1B all conditioned their support of the plan upon the continuation of the Community Advisory Committee ("CAC") that was established in 1999 as a condition of the Zoning Commission's approval of University's 1998 Central Campus Master Plan. The University agreed to continue the CAC and include a senior University official in the meetings.
23. The Bloomingdale Civic Association, ANC 1B, the Georgia Avenue Community Development Task Force, and the LeDroit Park Civic Association all acknowledged a need for the University to work more closely with its students and its neighbors to foster better relationships between the students who live in off-campus housing and community residents. To help develop a more robust infrastructure for managing these relationships, the University agreed to implement the following measures
 - (a) The development of an off-campus housing policy that will be published in the student handbook;
 - (b) The creation of an inventory of off-campus housing so that students who live off-campus can be readily identified by address,
 - (c) Regular convening of students who live off-campus to orient them to the community's history and heritage, introduce them to community leaders, provide them with tips for safety and adjustment to community living and remind them of off-campus housing policies, their rights and responsibilities,
 - (d) Working with community groups to organize welcoming events for students; and
 - (e) Establishing a website that.
 - (1) Provides valuable information to students and community members such as contact information for University staff, the Metropolitan Police Department ("MPD"), the Department of Consumer and Regulatory Affairs ("DCRA"), and community leadership in the event issues arise or complaints need to be filed;
 - (2) Contains a complaint form that can be filled out on line by any complainant who needs to alert the University of a concern they may have,

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- (3) Sets forth instructions regarding the procedures that students and community members should follow to have complaints addressed most efficiently and effectively;
 - (4) Assigns a University staff member to be responsible for monitoring complaints filed and directing them to the appropriate persons to resolve the issues raised;
 - (5) Identifies issues that should be addressed by the University, MPD, the Landlord Tenant Division of DCRA or others; and
 - (6) Identifies landlords' and tenants' rights and responsibilities as they relate to off-campus housing in which students reside, such as safety hazards on the property; overflowing trash problems, overcrowding; rodent and/or insect infestation, etc.
24. The University submitted a rationale justifying the treatment of the Howard University Middle School, located within the campus boundaries, as an accessory university use for zoning purposes. As such, the Middle School's parking requirements can be met within the overall Campus Plan parking standards.
25. As directed by 11 DCMR § 3119.2, the Zoning Commission required the Applicant to satisfy the burden of proving the elements necessary to establish the case for a special exception under 11 DCMR § 210.
26. On December 12, 2011, the University submitted a post-hearing memorandum in which it responded to the Zoning Commission, OP, DDOT, ANCs 1B and 5C, the LeDroit Park Civic Association, the Bloomingdale Civic Association, the Pleasant Plains Task Force, and the Georgia Avenue Community Development Task Force. In its post-hearing memorandum, the University provided all of the additional information requested by the Zoning Commission and accepted and committed to implementation of the recommendations set forth in the statements by the Office of Planning, the Department of Transportation and the various neighborhood organizations.

CONCLUSIONS OF LAW

The Applicant is seeking a special exception, pursuant to §§ 210 and 3104 of the Zoning Regulations, for approval of a new Campus Plan. The Zoning Commission is authorized to grant a special exception where, in the judgment of the Zoning Commission based on a showing through substantial evidence, the special exception will be in harmony with the general purpose and intent of the Zoning Regulations and Maps and will not tend to affect adversely the use of

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neighboring property in accordance with the Zoning Regulations and Zoning Maps. (D.C. Official Code § 6-641.07(g)(2)(2001), 11 DCMR § 3104.1.)

The Zoning Regulations specify that a university in a Residence Special Purpose (SP) or Mixed-Use (Commercial Residential) (CR) Zone District shall be located so that it is not likely to become objectionable to neighboring property because of noise, traffic, number of students, or other objectionable conditions. (11 DCMR § 210.2, § 507.7 and § 615.2.) With the imposition of conditions contained in the Order, the Zoning Commission concludes that the Applicant has met its burden of showing that its use of its property will not be objectionable to neighboring property.

The Zoning Commission concludes that the proposed 2011 Plan includes an acceptable and appropriate range of projects. The Zoning Commission also concludes that, in addition to making traffic and parking assessments, the University articulated its vision for the campus environment successfully.

The Zoning Commission notes, and gives great weight to, the recommendations by OP that the proposed Campus Plan should be approved subject to certain conditions designed to insure that the University will conform to the requirements of § 210 of the Zoning Regulations, especially §§ 210.2 and 210.7. The Zoning Commission has incorporated many of OP's recommended conditions which have been agreed to by the University into the approval of the new Campus Plan. The Zoning Commission also notes and gives great weight to the issues and concerns of ANCs 1B and 5C and carefully considered their comments in formulating the conditions of approval of the Campus Plan.

The Zoning Commission finds that the Campus Plan boundaries and proposed enrollment, faculty, and staff caps are reasonable and appropriate. Because the caps are a continuation of the status quo and have proven to be adequate in the past, they are not likely to become objectionable. Further, the Zoning Commission concludes that the Campus Plan provides adequate housing and conditions regarding off-campus student housing, and this approval, subject to conditions, will ensure no adverse impacts on neighboring property as a result of students living off-campus. The Zoning Commission encourages the University's plans to implement various sustainability and green practices.

Based upon the record before the Zoning Commission, it concludes that the Applicant has met the burden of proof, under 11 DCMR §§ 3104.1, 3035, and 210, and that the requested relief will be in harmony with the general purpose and intent of the Zoning Regulations and Map, and will not tend to adversely affect the use of neighboring property in accordance with the Zoning Regulations and Map. It is therefore **ORDERED** that the application for a new Campus Plan be **GRANTED, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL:**

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1. This 2011 Plan and the level of University operation it describes, including the Howard University public charter middle school, are approved until December 31, 2027, subject to the following conditions, or until such time prior to that date as the Zoning Commission determines that conditions warrant submission of a campus plan amendment or an updated campus plan;
2. The approved 2011 Plan boundary shall be the Central Campus as shown on Exhibit 85 in the record;
3. The Central Campus may only be developed in accordance with the plans and materials submitted by the Applicant marked as Exhibit 5 of the record, as modified by the guidelines, conditions, and standards of this Order;
4. The University shall submit to the Zoning Commission, as a special exception, each individual request to construct a building or structure, which is described in the 2011 Plan, and located in a Residence, Special Purpose, or Mixed-Use (Commercial Residential) Zone District. Along with each request, the University shall submit information as to how the particular building or structure complies with the 2011 Plan,
5. The University shall submit a campus plan amendment and/or further processing application should the Howard University Hospital propose any structural changes or expansions;
6. The University shall not exceed a maximum enrollment of 12,000 students enrolled in classes located in the area covered by the 2011 Plan. The maximum employment for faculty and staff shall not exceed 7,456 (including the Howard University Hospital),¹
7. **Not later than August 31, 2026**, the University shall provide student housing within the 2011 Plan boundaries for at least 70% of its undergraduate student population;
8. The University shall continue to work with the Community Advisory Council to clearly address issues to enhance community relations. A senior level University representative will participate in the meetings;
9. In the transitioning of existing student residence halls away from use as student housing into faculty and/or workforce housing, the University shall not allow the halls to remain vacant for a period of more than one year;
10. In an effort to promote respectful relationships between University students who live in off-campus housing and community residents, the University shall implement the following measures:

¹ The University may of course request an increase to these caps through an application to modify this Order

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- (a) **No later than December 31, 2012** develop an off-campus housing policy that will be published in the student handbook,
 - (b) **No later than December 31, 2012** create an inventory of off-campus housing so that students who live off-campus can be readily identified by address,
 - (c) **Throughout the life of the Campus Plan** regularly convene students who live off-campus to orient them to the community's history and heritage, introduce them to community leaders, provide them with tips for safety and adjustment to community living and remind them of off-campus housing policies, their rights and responsibilities;
 - (d) **Throughout the life of the Campus Plan** work with community groups to organize special events where students and neighbors can come together in a pleasant welcoming environment; and
 - (e) **No later than December 31, 2012** establish a website by that among other things
 - (1) Provides valuable information to students and community members such as contact information for University staff, MPD, DCRA and community leadership in the event issues arise or complaints need to be filed, and
 - (2) Contains a complaint form that can be filled out on line by any complainant who needs to alert the University of a concern they may have,
11. The University shall undertake the following transportation measures
- (a) **Throughout the life of the Campus Plan** coordinate closely with DDOT regarding the roadway design of Georgia Avenue to ensure successful improvement of transit facilities, changes to curbside parking, and minimization of vehicular delay on the corridor;
 - (b) **Prior to the issuance of a certificate of occupancy** for the proposed new student residence halls along 4th Street, and subject to the permission of DDOT, install a new traffic signal at the intersection of College and 4th Streets, N W ;
 - (c) **No later than December 31, 2015**, fund at least one Bikeshare station on the central campus in order to help meet the demand for bicycle transportation and to connect with new activity centers and residential nodes where Bikeshare bicycles and docks have already been installed,
 - (d) **Throughout the life of the Campus Plan** the University shall implement a TDM Plan to encourage students, faculty and staff to reduce the number of drive-alone

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trips to the central campus and increase their use of transit and other alternative modes of transportation. The TDM Plan shall include:

- (1) Maintenance of bus stops during construction, should any construction activity necessitate bus stop relocation;
- (2) An increase in the amount of short-term and long-term bicycle parking on campus as described in the TDM Plan submitted to DDOT on November 21, 2011;
- (3) Offering non-University tenants of new campus plan buildings the option to purchase or lease parking spaces at market rate, instead of including them in the tenancy lease, thus giving them an opportunity to reduce their use of on-site parking,
- (4) Posting and publication of the final TDM Plan on the University's Parking and Shuttle webpage and in other University media, where commuter benefits and timelines for implementation will be publicized for all faculty staff and students,
- (5) Identification of a TDM Leader;
- (6) Installation of at least one transportation information kiosk per year for the first five years of the campus plan implementation;
- (7) Establishment of weblinks to commuter support websites;
- (8) Maintenance and improvement of the University shuttle bus service where necessary;
- (9) Expansion of telecommuting practices and the promotion of flextime schedules where appropriate for faculty and staff;
- (10) An increase in the price of parking on University parking lots by 100% for all permit holders on lots with occupancy levels of 80% or greater beginning in school year 2012-2013;
- (11) Encourage an increase in the use of WMATA's SmartBenefits program; and
- (12) Conduct annual modal split surveys and monitoring practices to determine the effectiveness of the TDM measures in reducing the percentage of drive-alone University faculty, staff and students. These will include the establishment of aspirational performance indicators and TDM targets (*see*

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Finding of Fact No. 19 (d) (12)) that the University shall use as benchmarks against which to measure progress; and

12. In accordance with the D.C. Human Rights Act of 1977, as amended, D.C. Official Code §§ 2-1401.01 et seq. (Act), the District of Columbia does not discriminate on the basis of actual or perceived: race, color, religion, national origin, sex, age, marital status, personal appearance, sexual orientation, gender identity or expression, familial status, family responsibilities, matriculation, political affiliation, genetic information, disability, source of income, or place of residence or business. Sexual harassment is a form of sex discrimination which is prohibited by the Act. In addition, harassment based on any of the above protected categories is prohibited by the Act. Discrimination in violation of the Act will not be tolerated. Violators will be subject to disciplinary action.

VOTE: 5-0-0 (Michael G. Turnbull, Marcie L. Cohen, Anthony J. Hood, Konrad W. Schlater, and Peter G. May to approve).

BY ORDER OF THE D.C. ZONING COMMISSION

Each concurring member approved the issuance of this Order.

ATTESTED BY:



SARA A. BARDIN
OFFICE OF ZONING DIRECTOR

FINAL DATE OF ORDER: March 2, 2012

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
Office of Zoning



Z.C. CASE NO.: 11-15

MAR 9 2012

As Secretary to the Commission, I hereby certify that on _____ copies of this Z C Order No. 11-15 were mailed first class, postage prepaid or sent by inter-office government mail to the following

1	<i>D.C. Register</i>	9	Commissioner Tony Norman 1B10 533 Gresham Place, N W Washington, D C. 20009
2	Cynthia Giordano, Esq. Saul Ewing 1919 Pennsylvania Avenue, N W Suite 550 Washington, D C 20006	10	Commissioner E Gail Anderson Holness 1B11 920 Euclid Street N W Washington, D C. 20001
3	ANC 1B 2000 14 th Street N W , Suite 100B Washington, D C 20009	11	ANC 5C P O Box 26183 Washington, D C 20001
4	Commissioner Myla Moss 1B01 335 U Street N W. Washington, D C. 20001	12	Commissioner John T Salatti 5C04 131 U Street NW Washington, D C 20001
5	Commissioner Alexandra Lewin-Zwerding 1B02 1346 Wallach Place, N W Washington, D C 20009	13	Gottlieb Simon ANC 1350 Pennsylvania Avenue, N W Washington, D C 20004
6	Commissioner Sedrick Muhammad 1B03 2515 13th Street N W , #504 Washington, D C 20009	14	Councilmember Jim Graham
7	Commissioner Mary Streett 1B05 1447 Florida Avenue N.W Washington, D.C 20009	15	DDOT (Martin Parker)
8	Commissioner Charles Meisch 1B06 1421 Chapin Street N W., #102 Washington, D.C 20009	16	Mehnda Bolling, Acting General Counsel DCRA 1100 4th Street, S W Washington, D C 20024
		17	Office of the Attorney General (Alan Bergstein)

ATTESTED BY: _____


Sharon S. Schellin
Secretary to the Zoning Commission
Office of Zoning

441 4th Street, N W , Suite 200-S, Washington, D C 20001

Telephone (202) 727-6311

Facsimile. (202) 727-6072

E-Mail dcoz@dc.gov

Web Site www.dcoz.dc.gov

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CAMPUS DEVELOPMENT PLAN

(CONTINUED)

IN SUPPORT OF STRATEGIC GOALS

The planning process involved the review of Howard University's needs and the strategic initiatives felt necessary to maintain and improve its core academic mission and the development of a Master Plan designed to implement these strategic goals.

ACADEMIC RENEWAL

The primary strategic directions for Academic Renewal were developed by Howard University as an outcome of:

- The Middle States re-accreditation process;
- The completion of the Self Study Report which examined all aspects of HU's programs and services;
- Governing and supporting structures, resources, and educational outcomes in relation to the institution's mission and goals; and
- The President's Commission for Academic Renewal (PCAR) Initiatives which conducted a full review and evaluation of the University's academic programs.

Factored into this self-examination is the recognition of several external influences; a competitive post-secondary educational marketplace; an economic climate that requires more fiscal discipline; and students of African American descent who have more choices today than was true 50 years ago. Based on these factors the University has determined that academic offerings need to be more selective with a focus on becoming a world-class research institution.

The vision for Howard in the 21st Century is to create a setting conducive to academic excellence, with growth in research, technology and innovation. A second and equally important goal is the responsibility of the University to create positive zones of engagement, influence and revitalization.

The academic drivers for the Master Plan include:

- Expansion of Graduate Programs;
- Support for Research Growth;
- Promotion of Science, Technology Engineering and Mathematics (STEM) and Bio-Medical Research;
- Improvement in the Physical Condition and Technology throughout the Campus Facilities;
- Improvement of Housing; and
- Support of the Students First Initiatives.

Howard University is the country's top-ranked historically black college or university, and is one of the leading comprehensive research-oriented, private universities in the nation. Until 2006, the University held the Carnegie Foundation's designation as a "Doctoral/Research University-Extensive," one of only 151 such universities in the nation and the only HBCU in the top tier. The University is currently classified by the Carnegie Foundation for the Advancement of Teaching as RU/H: Research Universities (high research activity); it aspires to become a RU/VH: Research Universities (very high research activity).

The University will continue to focus on providing its predominantly African American population (student, faculty, and staff) with outstanding educational opportunities. Academics and research topics include those which disproportionately impact minority populations, particularly those related to the African Diaspora.

The demand analysis for academic space has determined that the University has a deficit of research space, in general. For example, the Physics Department has 3,000 SF of research space listed in the database and 27 faculty performing research. This is an average of roughly 110 ASF/faculty, significantly less than the average benchmark for Research VH (1,820 ASF/faculty). Similarly, the Chemistry Department has 18 faculty members using 12,200 ASF of research space (675 ASF/faculty); this is significantly less than the average benchmark of 3,020 ASF/faculty.

A high priority of the Campus Master Plan is to address this need with plans for an Interdisciplinary Science and Engineering (ISEI) / STEM Building and a Computational Science (CS) / Biomedical Science (BioS) Building with a combined total of 165,000 GSF of state-of-the-art research facilities. These two buildings are planned to be built in Phase One of the Development Plan.

The ISEI/STEM building will be located on Bryant and 6th Street and the CS/BioS Building will be located on Georgia Avenue at W Street. Both buildings are sited for their adjacency to existing physical and health sciences facilities.

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CAMPUS DEVELOPMENT PLAN

(CONTINUED)

These new cutting-edge research buildings will be built to the highest standards to meet the needs of 21st Century research applications, advanced technology and emerging science. Modern research buildings are essential for: recruiting and retaining world-class faculty; improving access to and collaboration with multiple researchers; expanding the University's ability to turn research into real-world applications; and helping Howard University keep its competitive edge in securing grant awards.

Overall, the Master Plan has provided for a 34% increase in research facilities on the campus with a Nanotechnology Building planned for Phase Two and a Health Sciences / Medical Arts Building planned in Phase Three. A 61% increase in full Academic/Research facilities can be realized should the University develop all of the research facilities envisioned in the plan.

QUALITY OF LIFE

In an effort to holistically improve the University community's quality of life, the Students First Campaign (SFC) launched several initiatives to reinforce Howard's student-centered learning environment. Student Life functions were featured heavily among the eight target areas that the SFC identified for procedural and organizational improvements. To create a fully integrated Student Life experience, the University intends to supplement the SFC's level of service upgrades with a robust facility development program that addresses:

- Student Housing
- Wellness and Recreation
- Student Activities
- Student Administrative Services
- Athletics

The convergence of these planned initiatives is intended to cultivate a more lively and appealing campus experience that contributes to the University's recruitment and retention efforts, alumni relations, academic performance, and overall institutional profile.

STUDENT HOUSING

Creating a high caliber collegiate experience includes deliberate residential life strategies to develop and operate a housing system that provides: close proximity to academic life; a common or shared human experience; appropriately graduated levels of supervision, independence, and responsibility; easy access to academic counseling and mentorship; orientation to campus life and activities; and various opportunities for the development of professional and life-skills.

Howard University is committed to implementing these progressive residential life strategies through a "housing continuum" that responds programmatically to the evolution of student needs through matriculation. To address these issues, the University has devised a phased development plan that will create new residences, upgrade existing residences and re-purpose other properties that are currently used for student housing. The goal is to generate approximately 2,300 new beds with a net increase of over 1,100 beds that are strategically aligned with student demand in number, typology, and location. Additionally, undergraduates will be moved from halls situated beyond the edge of campus into a secure and nurturing environment designed to enhance their personal development and support their academic progress. The end result will allow Howard to house nearly 70% of its full-time student population, as compared to the almost 46% currently housed.

A centralized Underclassman Housing District will be developed in Phase One. This district is planned along the eastern edge of the campus, adjacent to similar existing student housing for the same population. The Phase One housing will be provided in two buildings that will create approximately 1,300 new beds. Housing in this zone will be designed to accommodate living-learning programs that support the academic mission.

The strong first year experience provided by this Underclassman District will be complemented by the subsequent development of an Upperclassman Housing District in Phases Two and Three. This second District will be located on the western side of Georgia Avenue to build upon existing densities of upperclassman housing and create a critical mass of student activity to invigorate the planned mixed-use corridor.

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CAMPUS DEVELOPMENT PLAN

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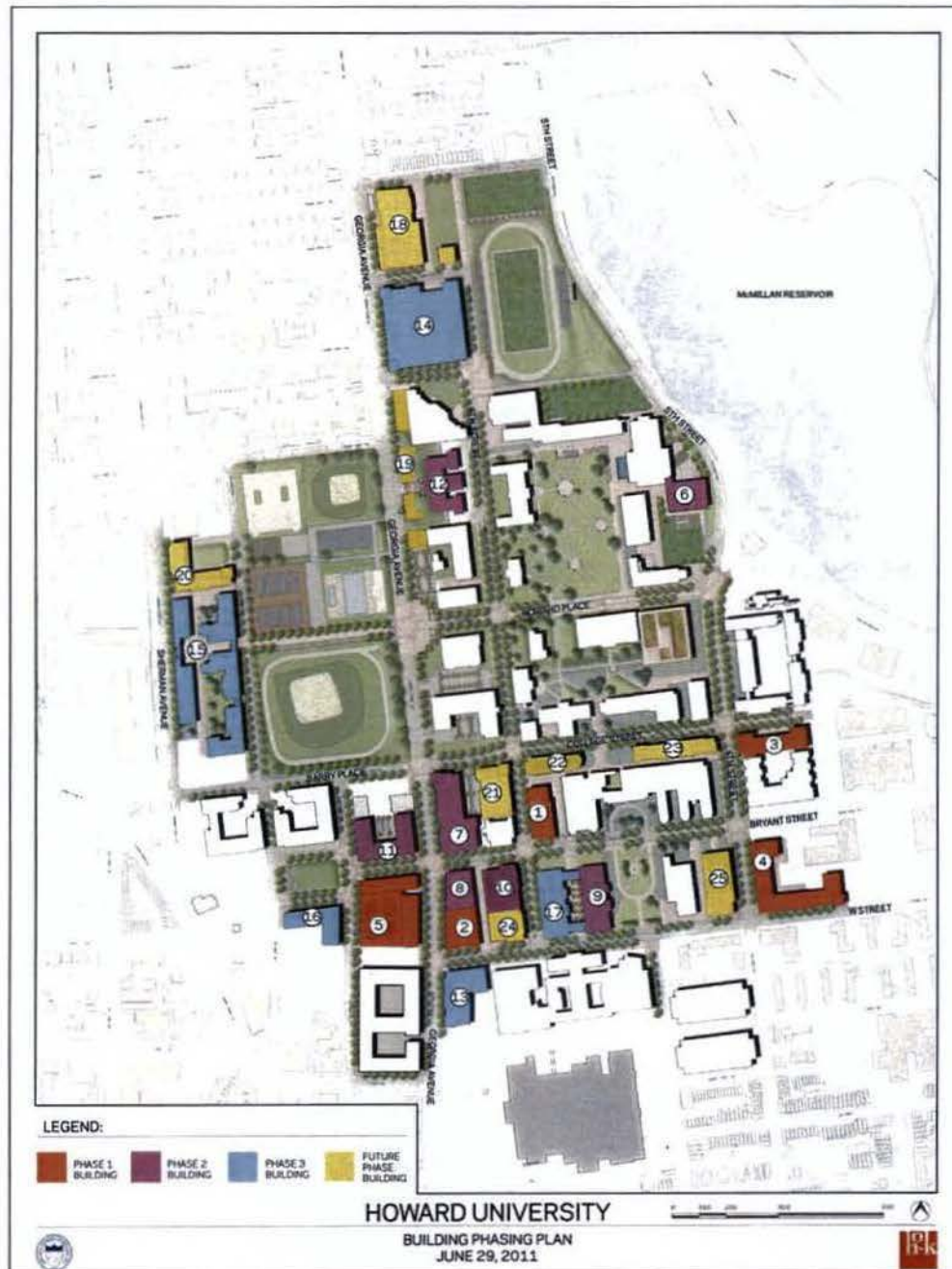


Figure 6-12: Building Phasing Plan

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CAMPUS DEVELOPMENT PLAN

(CONTINUED)

Table 6-1: Proposed Program Elements

Location Key	Building Name/Function	Proposed Bldg Height Approximate Feet	Proposed Footprint size (gsf)	Total size (gsf)	Proposed Parking Structures # of levels # of spaces
Phase One (1-3 years)					
1	Interdisciplinary Science and Engineering Bldg. (ISEI) / STEM	50-60	12,800	65,000	
2	Computational Science (CS) / Biomedical Science (BioS) + Retail	90-110	16,500	100,000	3
3	Under Classman Residential Hall #1	70	17,224	138,666	
4	Under Classman Residential Hall #2	60	37,530	251,431	
5	Campus Wellness and Recreation Center / Upper Classmen Res. + Retail	90-110	55,000	178,750	3
	Upper Classman Residential (upper stories)	(above)			345
	Total			733,847	495
Phase Two (3-5 years)					
6	Blackburn Center Renovation	30-40	35,000	105,000	3
7	School of Communications + Retail	90-110	28,000	168,000	2 - 3
8	Academic / Support Facilities / Public Safety Building	90-110	28,000	168,000	2 - 3
9	Nursing Allied Health + Pharmacy	50-60	20,000	100,000	
10	Nanotechnology Building	70-80	20,000	120,000	
11	Upper Classman Residence Hall #1 + Retail	90-110	14,000	98,000	3
12	Miner Building Renovation			82,737	
	Total			841,737	920
Phase Three (5-7 years)					
13	Future Healthcare Sciences / Medical Arts + Retail	90-110	25,000	175,000	2 - 3
14	Intercollegiate Athletics Complex + Retail	40-60	80,000	160,000	3
15	Graduate / Work Force Housing	50-60	75,751	234,000	
16	Upper Classman Residential Hall #2	90-110	24,000	192,000	
17	Teaching and Learning Building	50-60	31,000	155,000	
	Total			741,000	870
Future Phase Capacity					
18	Academic / Residential + Retail	30-50	45,481	136,443	
19	Institutional Infill	15-20	21,180	21,180	
20	Middle School	40-50	20,000	80,000	
21	Academic / Research	40-50	16,000	64,000	
22	Academic / Research	40-50	17,000	68,000	
23	Academic / Research	40-50	16,000	64,000	
24	Academic / Research	70-80	14,000	84,000	
25	Academic / Research	50-60	31,000	155,000	2
	Total			672,623	190

Table 6-2: Phasing Breakdown

PHASE ONE PROGRAM INFORMATION								
	Administration							
	Academic GSF	GSF	Recreation GSF	Athletics GSF	Housing GSF	Maintenance GSF	Hospital GSF	Other GSF
New Developments								
Interdisciplinary Science + Engineering Building (ISEI) / STEM	65,000							
Computational Sciences (CS) / Biomedical Science (BioS) + Retail	80,000							20,000
Under Classmen Hall #1					121,646			
Under Classmen Hall #2					247,647			
Campus Wellness / Recreation / + Retail			130,000					48,750
TOTAL OF NEW DEVELOPMENTS	145,000	-	130,000	-	369,293	-	-	68,750
Buildings to be Demolished								
Mental Health Clinic							12,700	
West Wing of CB Powell	16,800							
TOTAL OF EXISTING DEVELOPMENTS TO REMAIN	2,070,715	387,426	190,812	872,131	1,271,426	310,373	873,240	204,372
TOTAL PROPOSED	2,215,715	387,426	320,812	872,131	1,640,719	310,373	873,240	273,122
Percent Change from Existing HU Central Campus								
	6%	0%	68%	0%	29%	0%	-1%	34%
								12%

EXHIBIT E

COMBINE SEWER DATA

- A** MANHOLE
TOP=107.28
INV IN=98.05
INV OUT=98.05
INV OUT=98.05
- B** MANHOLE
TOP=107.62
INV IN=98.05
INV OUT=98.05
INV OUT=98.05
- C** MANHOLE
TOP=108.91
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- D** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
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- E** MANHOLE
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INV IN=100.54
INV OUT=100.54
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- S** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- T** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- U** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
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- V** MANHOLE
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INV OUT=100.54
- W** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- X** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- Y** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54
- Z** MANHOLE
TOP=108.41
INV IN=100.54
INV OUT=100.54
INV OUT=100.54

STORM SEWER DATA

- 1** GRATE INLET
TOP=103.87
INV IN=98.05
INV OUT=98.05
- 2** MANHOLE (STRUCTURE BOX)
TOP=104.34
INV IN=98.05
INV OUT=98.05
- 3** GRATE INLET
TOP=103.87
INV IN=98.05
INV OUT=98.05
- 4** GRATE INLET
TOP=103.87
INV IN=98.05
INV OUT=98.05
- 5** MANHOLE (STRUCTURE BOX)
TOP=104.34
INV IN=98.05
INV OUT=98.05
- 6** MANHOLE (STRUCTURE BOX)
TOP=104.34
INV IN=98.05
INV OUT=98.05

TRAVERSE DATA

NO	NORTHING	EASTING	ELEV	DESCRIPTION
100	5000.0000	10000.0000	102.79	CROSS CUT
101	5000.4081	9757.4875	103.61	CROSS CUT
102	5028.5078	9784.4557	106.77	MAG NAL
103	5085.6876	9794.7042	107.77	PIV NAL
104	5085.6876	9999.9219	107.30	MAG NAL
105	5079.7221	9994.9334	104.97	MAG NAL

BENCH MARK DATA

NO	ELEV	DESCRIPTION
500	105.81	CROSS CUT ON THE BOLT AT THE FIRE HYDRANT
501	103.77	SQUARE CUT ON CONCRETE PAD

CHECK POINT

Point No.	Date	Description
1	11/18/11	Check Point
2	11/18/11	Check Point
3	11/18/11	Check Point
4	11/18/11	Check Point
5	11/18/11	Check Point
6	11/18/11	Check Point
7	11/18/11	Check Point
8	11/18/11	Check Point
9	11/18/11	Check Point
10	11/18/11	Check Point



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PROFESSIONAL ENGINEERS & LAND SURVEYORS
10 G STREET, N.E. SUITE 400
WASHINGTON, D.C. 20002
PHONE: (202) 638-4848 FAX: (202) 638-4801
112-231-0001

This Existing Conditions Plan is based on a Boundary and Topographic Survey performed by AMT, LLC, under file number 112-231.001, dated September 26, 2012.

William L. Gilbert, LS
District Of Columbia Licensed Surveyor
License Number 905059



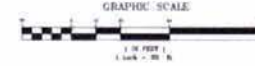
VICINITY MAP

NOTES

1. HORIZONTAL DATUM: DISTRICT OF COLUMBIA SURVEYOR'S OFFICE MEAN
2. VERTICAL DATUM: BASED ON DISTRICT OF COLUMBIA DEPARTMENT OF PUBLIC WORKS
3. PROPERTY IS ZONED: LOT 831 C-1-3
4. BOUNDARY INFORMATION SHOWN HEREON WAS OBTAINED FROM RECORDS AND VERIFIED IN THE FIELD AS FAR AS POSSIBLE. PROPERTY LINE DIMENSIONS FROM OFFICIAL CITY RECORDS MAY NOT NECESSARILY AGREE WITH ACTUAL MEASURED DIMENSIONS. ALL PROPERTY LINES ARE THE PROPERTY OF COLUMBIA AND SUBJECT TO CHANGE BY THE OFFICE OF THE SURVEYOR, D.C.
5. THE UNDERGROUND UTILITIES INDICATED HEREON ARE DERIVED FROM PLANS SUPPLIED BY VARIOUS UTILITY COMPANIES AND LIMITED SURFACE UTILITY ENGINEERING (LSE) QUALITY LEVEL B DESIGNATION. THE LOCATION OF THESE UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND NOT NECESSARILY AGREE WITH ACTUAL MEASURED DATA OR ARE UNDETERMINED BY CONVENTIONAL METHODS. NO GUARANTEE OF ACCURACY IS EXPRESSED IN REGARD TO THE ACCURACY OF COMPLETION OF UTILITY INFORMATION PROVIDED HEREON. UTILITIES LABELED (DATA) ARE SHOWN BASED UPON DATA ACCORDING TO RECORDS. UTILITIES LABELED (PIV) ARE SHOWN BASED UPON DATA ACCORDING TO DC WATER AS-BUILT. UTILITIES LABELED (DATA-PIV) ARE SHOWN BASED UPON DATA ACCORDING TO DESIGN PLANS FROM ICE JACKSON ASSOCIATES, P.C. CONSULTING ENGINEERS SHEET C-1 AND C-4 APPROVED 1/24/15.
6. CONTOUR INTERVAL IS ONE (1) FEET
7. PROPERTY INFORMATION
LOT 831 SQUARE 3000
AREA: 6293.50 SQ FT OF 0.5247 AC (RECORD)
AREA: 6293.50 SQ FT OF 0.5247 AC (PLAN)

LEGEND

- 1. BUSH
- 2. GRATE INLET
- 3. GRATE INLET (GROUND)
- 4. STORM MANHOLE
- 5. DRAIN
- 6. SINGLE POST SIGN
- 7. TRASH CAN
- 8. TELEPHONE MANHOLE
- 9. DOUBLE POST SIGN
- 10. ELECTRIC MANHOLE
- 11. POWER POLE WITH STREET LIGHT
- 12. LIGHT POLE
- 13. POWER POLE
- 14. LAMP
- 15. ELECTRIC TRANSFORMER
- 16. GROUND SHOT
- 17. GAS VALVE
- 18. UTILITY MANHOLE
- 19. SANITARY SEWER MANHOLE
- 20. CLEAN OUT
- 21. TELEPHONE POLE
- 22. SHAW-WALKER CONNECTION
- 23. HOSS BORN
- 24. WATER MANHOLE
- 25. WATER METER
- 26. FIRE HYDRANT
- 27. GAS VALVE
- 28. GAS VALVE
- 29. BOLLARD
- 30. PARKING METER
- 31. TRANSVERSE
- 32. BENCHMARK
- 33. CURB AND GUTTER
- 34. WEAPON STOPS
- 35. PAINTED ARROW ON PAVEMENT
- 36. OVERHEAD UTILITIES
- 37. WATERLINE PAINT MARK
- 38. GAS LINE PAINT MARK
- 39. COMMUNICATION PAINT MARK
- 40. ELECTRIC PAINT MARK
- 41. LAMP/CONCRETE PAINT MARK
- 42. BUILDING OVERHEAD
- 43. DATA ACCORDING TO RECORDS
- 44. DATA ACCORDING TO DC WATER AS-BUILT
- 45. PARAPET ELEVATION
- 46. FINISH FLOOR ELEVATION
- 47. REBUILT/RECONSTRUCTED FLOOR
- 48. END OF INFORMATION
- 49. BUILDING



HDR ARCHITECTURE, INC.

100 PENNSYLVANIA AVENUE, SUITE 501
WASHINGTON, DC 20004



LANCE BAKER & ASSOCIATES, INC.
700 GEORGIA AVENUE, SUITE 200
WASHINGTON, DC 20002

HOWARD UNIVERSITY
INTERDISCIPLINARY RESEARCH BUILDING

2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20009



SCHEMATIC DESIGN

NO.	DATE	DESCRIPTION
1	11/18/11	PRELIMINARY DESIGN
2	11/18/11	REVISIONS
3	11/18/11	REVISIONS
4	11/18/11	REVISIONS
5	11/18/11	REVISIONS
6	11/18/11	REVISIONS
7	11/18/11	REVISIONS
8	11/18/11	REVISIONS
9	11/18/11	REVISIONS
10	11/18/11	REVISIONS

EXISTING CONDITIONS

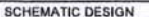
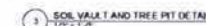
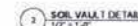
SD SUBMITTAL
OCTOBER 19, 2012

PRELIMINARY NOT FOR CONSTRUCTION
RECORDING PURPOSES OR IMPLEMENTATION

1"=20'

C-1.0

SCHEMATIC DESIGN



2012 DEC -4 PM 2:16

HOW ARCHITECTURE, INC.

7208 WISCONSIN AVENUE, SUITE 201
BETHESDA, MARYLAND 20814



RESEARCH

2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20059



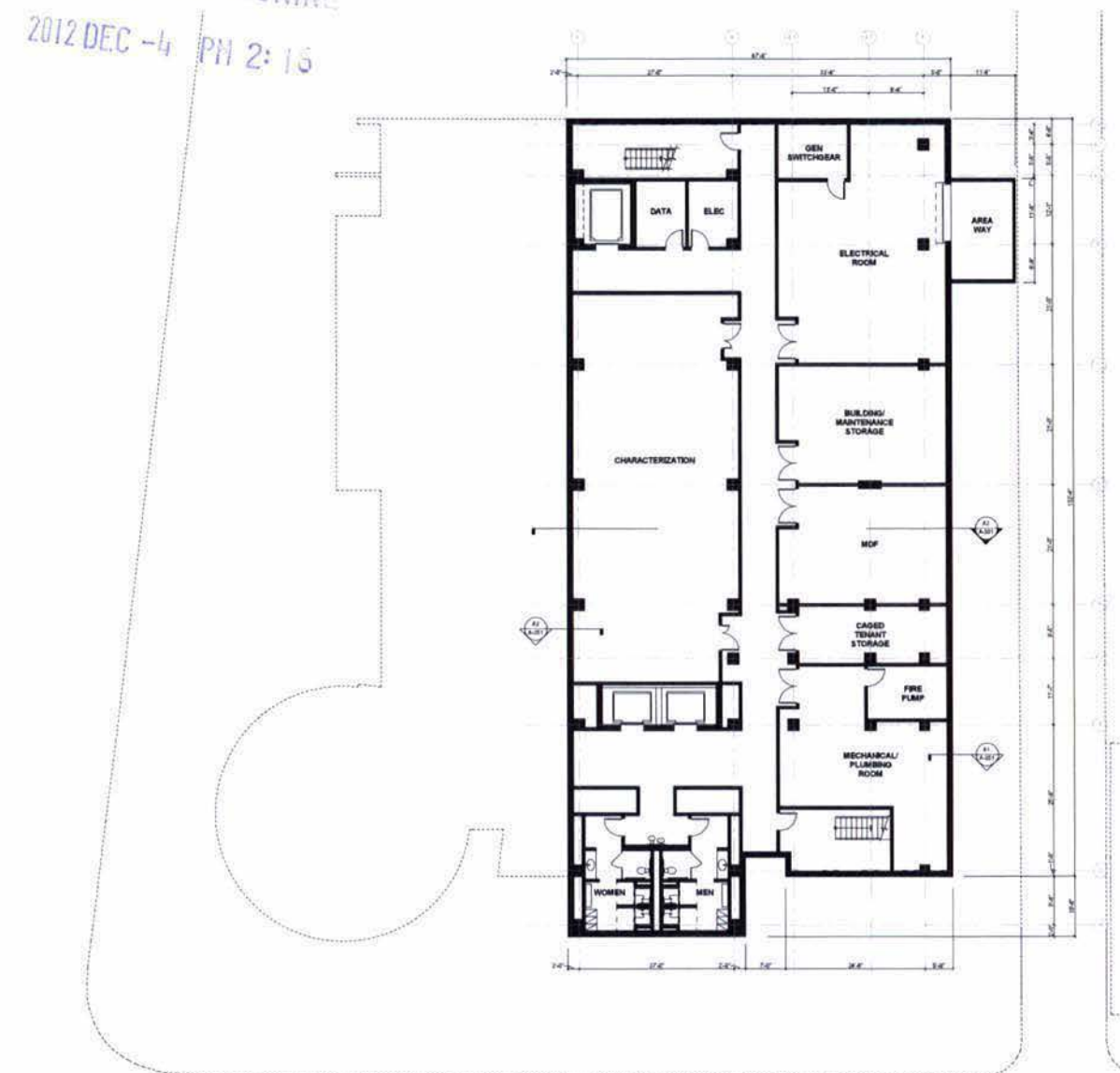
SCHEMATIC DESIGN

PRELIMINARY

0.25	0.50
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A-100

SCHEMATIC DESIGN



A2 BASEMENT

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GROSS FLOOR AREA	
SECOND LEVEL	15,487 GSF

HDR

HDR ARCHITECTURE, INC.

7200 ROCK CREEK AVENUE, SUITE 501
BETHESDA, MARYLAND 20814



LANCE BALEY & ASSOCIATES, INC.
1000 NEWBURY AVENUE, SUITE 200
WASHINGTON, DC 20002

DATE: 12/11/12

INTERDISCIPLINARY RESEARCH BUILDING

2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20009



HOWARD
UNIVERSITY

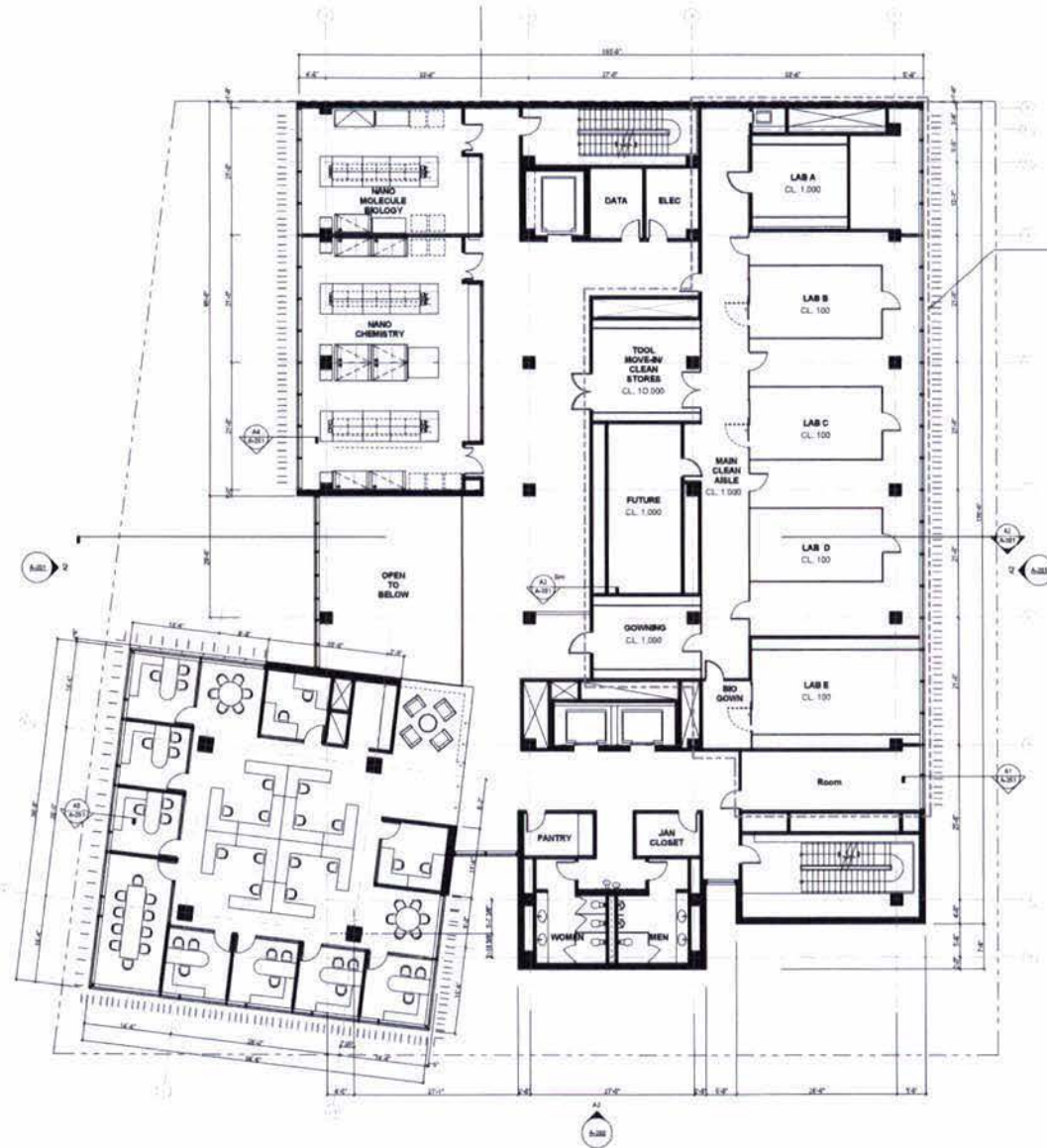
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100	12/11/12	SCHEMATIC DESIGN

PRELIMINARY
12/11/12

PLAN - SECOND FLOOR

A-102

SCHEMATIC DESIGN

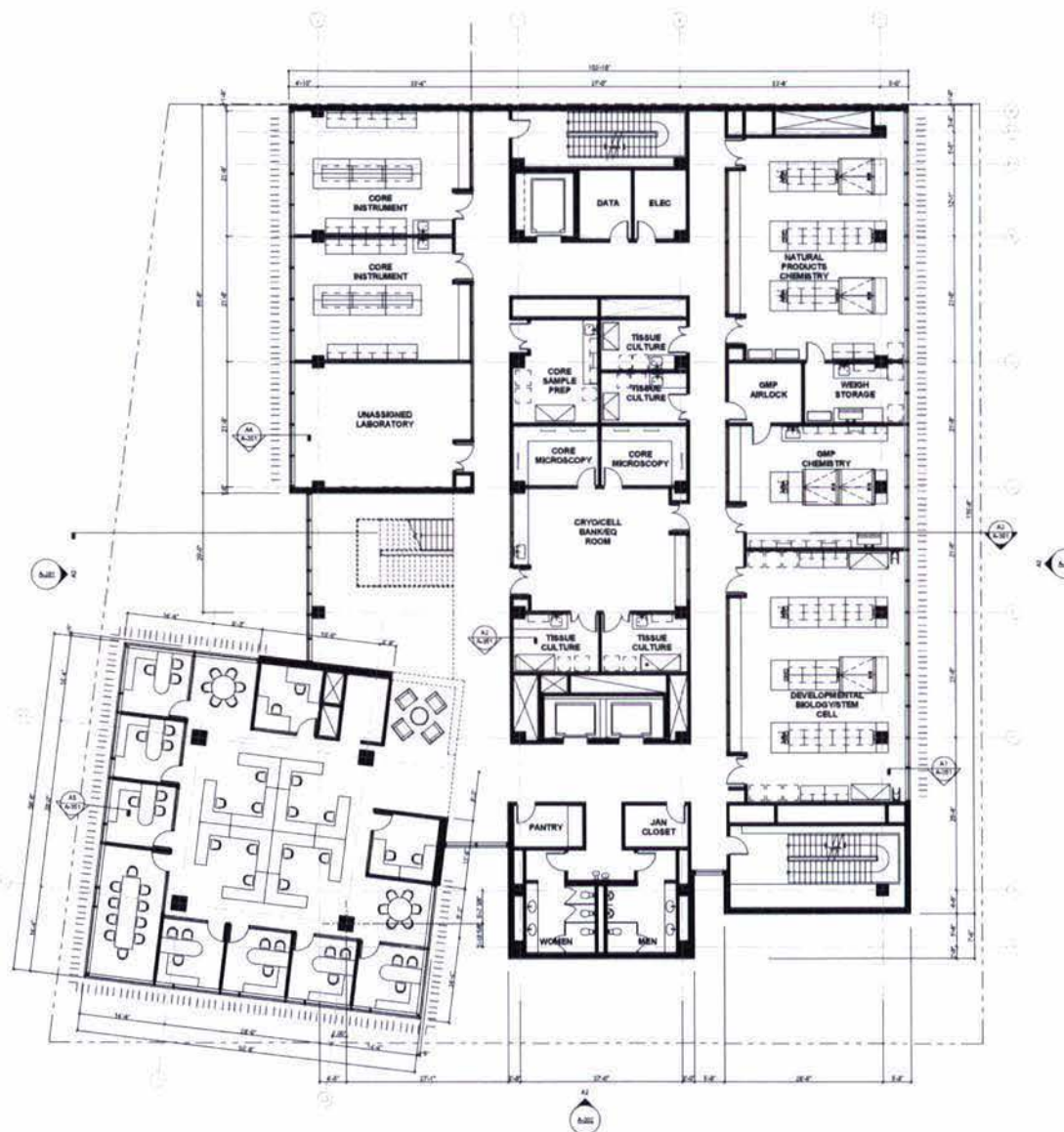


A2 SECOND LEVEL
12/11/12



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2012 DEC -4 PM 2:15



GROSS FLOOR AREA	
THIRD LEVEL	16,187 GSF



INTERDISCIPLINARY
RESEARCH
BUILDING
2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20009



SCHEMATIC DESIGN	
PROJECT NUMBER	10000-0000
ORIGINAL DATE	10/00
PROJECT REVISION	REVISION 1
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PROJECT REVISION	REVISION 3
PROJECT REVISION	REVISION 4
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PROJECT REVISION	REVISION 98
PROJECT REVISION	REVISION 99
PROJECT REVISION	REVISION 100

PRELIMINARY
NOT FOR CONSTRUCTION

PLAN - THIRD FLOOR

A2 THIRD LEVEL
1/8" = 1'-0"



A-103
SCHEMATIC DESIGN

This is a detailed architectural floor plan of a laboratory building. The plan is oriented with a north arrow pointing towards the top-left. The building is divided into several functional areas:

- Top Left:** Cloud Env. Chamber, Corav. Env. Chamber, Atmosphere Laboratory, Device Development, and an Open to Below area.
- Top Center:** Data, Elec, and a staircase.
- Top Right:** Unassisted Laboratory, Core Electrical Shop, 37°C Env. Cham., and Tissue Culture.
- Middle Left:** Glasshouse Autoclave, Equipment Room, Flow Cytometry, and DNA/RNA/PCR.
- Middle Right:** Microbial, Tissue Culture, and another Tissue Culture area.
- Bottom Left:** A large area labeled "OPEN TO BELOW" with a staircase and a large open space.
- Bottom Center:** Pantry, Jan. Closet, Women, and Men restrooms.

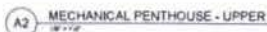
The plan includes numerous dimensions (e.g., 10'-0", 12'-0", 14'-0") and section markers (e.g., A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, A13, A14, A15, A16, A17, A18, A19, A20, A21, A22, A23, A24, A25, A26, A27, A28, A29, A30, A31, A32, A33, A34, A35, A36, A37, A38, A39, A40, A41, A42, A43, A44, A45, A46, A47, A48, A49, A50, A51, A52, A53, A54, A55, A56, A57, A58, A59, A60, A61, A62, A63, A64, A65, A66, A67, A68, A69, A70, A71, A72, A73, A74, A75, A76, A77, A78, A79, A80, A81, A82, A83, A84, A85, A86, A87, A88, A89, A90, A91, A92, A93, A94, A95, A96, A97, A98, A99, A100). The plan also shows various furniture and equipment layouts, including tables, chairs, and specialized laboratory equipment.

SCHEMATIC DESIGN

Architectural floor plan of the 10th floor. The plan shows a large rectangular space with a grid of columns and rows. Key areas include a 'MECHANICAL PENTHOUSE' in the center, an 'ELEVATOR CONTROL RM.' at the bottom center, and a 'DATA' room and 'ELEC.' room at the top center. There are also two 'STAIR' areas, one at the top center and one at the bottom right. The plan includes dimensions for various sections and a north arrow pointing towards the top right.

SCHEMATIC DESIGN

SCHEMATIC DESIGN



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7200 WICK CREEK AVENUE, SUITE
BETHESDA, MARYLAND 20814

中興大學圖書館

2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20059



TIME	DATE	DESCRIPTION
		PROJECT NUMBER
		PROJECT NAME
		PROJECT LOCATION
		PROJECT OWNER
		PROJECT MANAGER
		PROJECT TEAM
		PROJECT BUDGET
		PROJECT STATUS
		PROJECT RISK
		PROJECT CONTACT
		PROJECT NOTES

PRELIMINARY

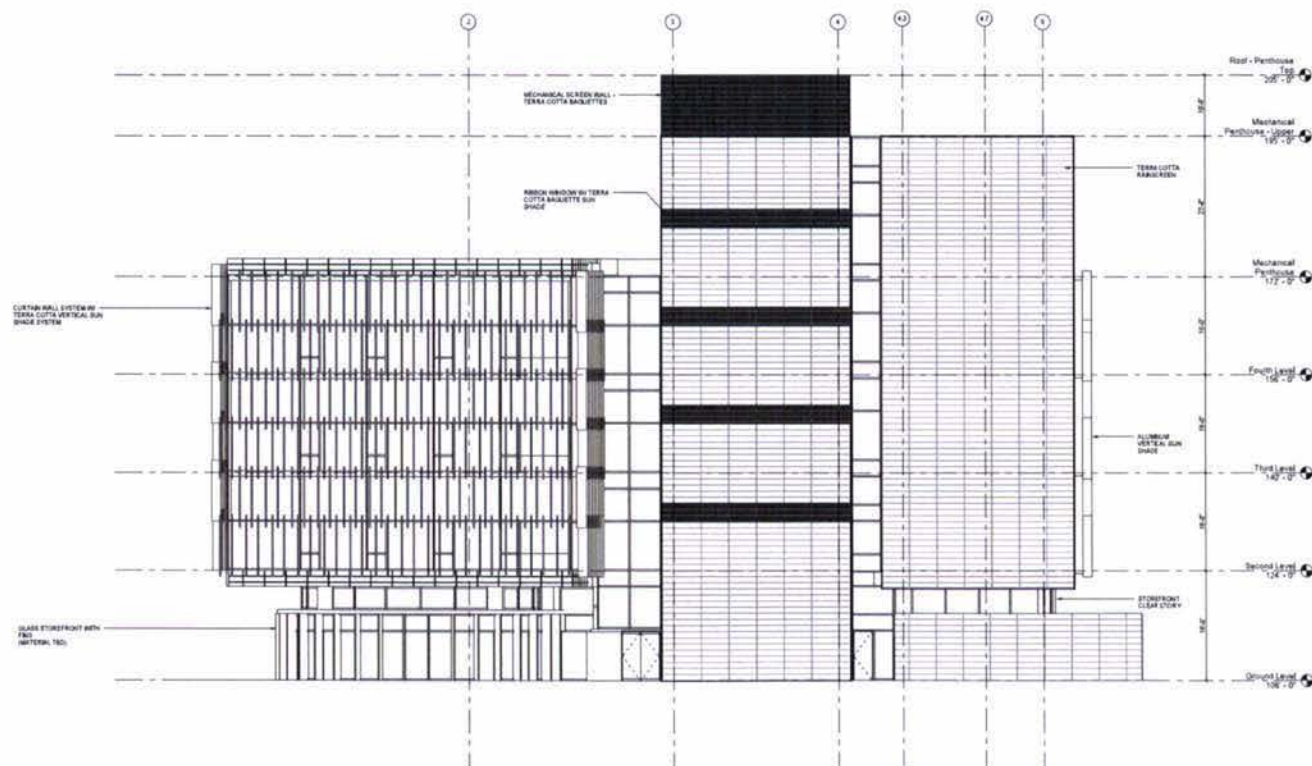
EXTERIOR ELEVATIONS

Small	100 + 100
-------	-----------

A-201

SCHEMATIC DESIGN

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A2 SOUTH
1/8" = 1'-0"

1" = 40'-0"

HDR

HDR ARCHITECTURE, INC.

1000 WISCONSIN AVENUE, SUITE 101
BETHESDA, MARYLAND 20814



LAURIE BAILEY & ASSOCIATES, INC.
700 GEORGIA AVENUE, NW, SUITE 200
WASHINGTON, DC 20002

PROJECT FIVE

INTERDISCIPLINARY RESEARCH BUILDING

2201 GEORGIA AVENUE, NW
WASHINGTON, DC 20009



**HOWARD
UNIVERSITY**

SCHEMATIC DESIGN

NO.	DATE	DESCRIPTION	BY	CHKD
1	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY
2	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY
3	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY
4	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY
5	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY
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10	01/11/12	SCHEMATIC DESIGN	LAURIE BAILEY	LAURIE BAILEY

PRELIMINARY
NOT FOR CONSTRUCTION

EXTERIOR ELEVATIONS

SCALE: 1/8" = 1'-0"

A-202

SCHEMATIC DESIGN

[illegible]

EXHIBIT F

GOVERNMENT OF THE DISTRICT OF COLUMBIA
DEPARTMENT OF TRANSPORTATION

2012 DEC -4 PM 2: 17



d. Policy, Planning and Sustainability Administration

MEMORANDUM

TO: Richard Nero
Acting Director, Office of Zoning

FROM: Sam Zimbabwe
Associate Director, PPSA *82*

DATE: November 23, 2011

SUBJECT: Zoning Commission Case 11-15
Howard University Central Campus Plan (2011)

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OFFICE OF ZONING

PROJECT SUMMARY

The President of Howard University (Applicant) has submitted, pursuant to 11 DCMR §§ 3104.1 § 210, special exception review and request for approval of its 2011 Howard University Central Campus Master Plan. The Applicant has also submitted, pursuant to 11 DCMR §§ 3104.1, 210 and 507, for special exception review and approval of further processing of an approved Campus Plan for its Central Campus. The further processing entails the construction of a residence hall at the southeast corner of the intersection of 4th and College Streets, N.W. and 4th and Bryant Streets, NW, more particularly described as Square 3068, a portion of Lot 30; and the construction of a residence hall on the east side of 4th Street, N.W., between W and Bryant Streets, more particularly described as Square 3069, Lot 66. The subject properties are in the SP-2 and R-5-B Zone Districts, respectively. The details of mitigations for the further processing application will be addressed by DDOT in a separate report.

The Howard University Campus is located at 2400 6th Street N.W. The central Howard Campus is made up of 118 acres and contains most of the University's academic and administrative activities. The campus is bounded by Harvard Street to the north; Florida Avenue to the south; 4th Street NW to the east; and Sherman Avenue to the west. The central campus is surrounded

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by the residential neighborhoods of Shaw, LeDroit Park, Bloomingdale, Pleasant Plains, Park View and Columbia Heights. The northern and eastern boundaries of the campus include the McMillan Reservoir.

One of the key inputs required to support the transportation elements of the Campus Plan is the provision of a comprehensive Transportation Impact Study. DDOT acknowledges that the Applicant has provided a copy of its Transportation Impact Study on October 28, 2011 prior to the 45 day deadline.

RECOMMENDATIONS IN BRIEF

Overall, the purpose of DDOT's review is to assess the potential impact of the project to determine if it will, "affect adversely, the use of neighboring property in accordance with the Zoning Regulations and Zoning Maps" (§3104.01). After an extensive agency evaluation, DDOT recommends approval of the Howard University Campus Plan subject to the conditions below:

- Coordinate closely with DDOT regarding the roadway design of Georgia Avenue to ensure successful improvement of transit facilities, changes to curbside parking, and minimization of vehicular delay on the corridor;
- Install a new traffic signal at the intersection of College Street and 4th Street NW;
- Further define and commit to a suite of Transportation Demand Management (TDM) measures for immediate implementation;
- Establish specific performance indicators and TDM targets, such as campus mode shares;
- Commit to an on-going, regular monitoring and reporting program of campus transportation activity, parking, and progress on TDM targets;
- Purchase and install at least one Capital Bikeshare station; and install additional bicycle parking in University garages and at building entrances.

With the anticipated addition of approximately 1000 students over 10 years, DDOT anticipates that the changes proposed in the Campus Plan will yield some modest impacts on the transportation network in terms of vehicular delay and cut-through traffic. However, DDOT believes these impacts can be significantly mitigated. Moreover, many of the changes proposed in the Campus Plan will create a net positive benefit for the transportation network and neighborhood connectivity.

TRANSPORTATION ANALYSIS

DDOT is committed to achieving an exceptional quality of life in the nation's capital by encouraging sustainable travel practices, constructing safer streets and providing outstanding access to goods and services. Central to this vision is improving energy efficiency and modern mobility by providing next generation alternatives to single occupancy driving in the city. As

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one means to achieve the agency mission, DDOT works through the zoning process to ensure that new land development is compatible with a multi-modal urban transportation system.

The following analysis evaluates the Applicant's Transportation Impact Study (TIS) to determine its accuracy and consistency with District policy goals.

STRATEGIC PLANNING

As noted, DDOT expects all Applicants undergoing zoning review to conduct a comprehensive multi-modal evaluation of the impacts of proposed action. In the case of the Howard University Campus Plan, the Applicant has performed its Transportation Impact Study in accordance with DDOT and national standards specifically outlined in the *DDOT Design and Engineering Manual*, and in light of DDOT staff direction. The study has taken into account planned land developments in the immediate vicinity as well as regional growth forecasts established by the Metro Washington Council of Governments (MWCOC). A more detailed review of the Applicant's TIS Methodology can be provided upon request.

The TIS must consider and apply direction from the District of Columbia's primary planning documents including the DC Comprehensive Plan, Small Area Plans, Modal Master Plans, Corridor Plans and other relevant publications. In this case, the Duke Small Area Plan, approved by the DC Council, contains several pertinent recommendations related to the street network. In particular, it highlights the need for re-establishing key east-west connections through the Howard University campus to enhance porosity through the site and improve neighborhood linkages.

In the most current Campus Plan submission, Howard University shows the reconnection of Bryant Street between Georgia Avenue and Sherman Avenue; W Street between Georgia Avenue and 9th Street NW; and College Street between Georgia Avenue and 6th Street NW. These elements represent a major achievement and the result of extensive negotiations between the District and the Applicant. Howard University deserves commendation for working these rights of way into their plans for redevelopment of campus properties.

The Georgia Avenue – Great Streets planning effort also requires special attention and is described below.

ROADWAY CAPACITY AND OPERATIONS

DDOT aims to provide a safe and efficient roadway network that provides for the timely movement of people, goods, and services. Analysis provided by the Applicant suggests that the traffic impacts of trips produced by the Campus Plan will produce modest increases in delay.

Georgia Avenue is a major arterial in the District of Columbia network and an evacuation route. The land use along the avenue is primarily commercial but also serves as a major connection between the Central Business District and Montgomery County in Maryland. In an effort to tie

together the community and the business along Georgia Avenue, the District embarked on a major planning effort six years ago that would eventually transform Georgia Avenue into a "Great Street" destination for residents and visitors alike. The Great Streets plan identified a section of Georgia Avenue between Florida Avenue and Barry Place as a potential segment to implement a transit-only (dedicated bus) lane to serve the high number of transit users in this area. Last year DDOT was awarded federal grant money to implement the transit-only lane and is now in the latter stages of engineering design.

The TIS demonstrates that Georgia Avenue will experience serious delay at the intersections along the campus frontage. In order to mitigate this outcome, the Applicant explores several possible scenarios in the TIS. Scenarios that remove the transit-only lane are not viable options for accommodating increased trips created by the Howard University Campus Plan. At this time, the Applicant must assume the transit-only lane as a baseline condition for traffic analysis. The remaining possibilities in the TIS follow:

- 1) Add left turn lanes to Georgia Avenue: As suggested, this scenario would install turn lanes within the existing roadway and assign five lanes of travel between Florida Avenue and Barry Place. Unfortunately, there is not enough space available in the current cross section to accommodate this proposal; at minimum DDOT would need 52' in curb to curb width. Georgia Avenue is classified as a major arterial that carries all classes of vehicles; and 9-10 foot lanes would not provide adequate and safe clearance. DDOT can explore the possibility of setting back buildings with the Applicant to allow left turn lanes, but DDOT understands this option is constrained and possibly undesirable for the University.
- 2) Restrict left turns: As suggested, this scenario would restrict left turn movements at the intersections of Barry Place, Bryant Street, W Street, and V Street. DDOT believes that a variation of this option may be the most realistic way to deal with the forecast congestion and protect successful operations of the transit lanes. However, DDOT does not expect that the left turn restrictions would be designed / implemented in the manner described in the TIS.

Because DDOT is currently in design of Georgia Avenue, DDOT will continue its coordination with Howard University and determine the best way to address left turn restrictions and other operations, signal timings, etc. related to the side streets. Preliminary ideas on the matter include peak-period left turn restrictions onto the side streets, while allowing through and turning movements coming out of the side streets.

Additional changes to curbside management have been proposed by the Applicant.

- 1) At Sherman Avenue and Barry Place, the applicant requests restricting on-street parking on the southbound approach during the morning peak periods to improve traffic flow. At this time Sherman Avenue is being reconstructed and the curb line will be moved, resulting in only one through lane in each direction. DDOT will determine if this

proposed mitigation is feasible once Sherman Avenue is finalized and additional observations are made. If deemed appropriate, the related signal and roadway design changes will be the responsibility of the Applicant.

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- 2) At Georgia Avenue and Barry Place, the Applicant requests removing 2-3 parking spaces along the eastbound approach to install a new left turn lane. This mitigation measure would improve operations however there are safety concerns that require additional analysis. DDOT and the Applicant will need to resolve this through the Georgia Avenue transit-lane design process referenced above. If the action is deemed appropriate it will be the responsibility of the Applicant.

Finally, the Applicant has determined that the Campus Plan (will generate additional vehicular and pedestrian traffic at the intersection of 4th Street and College Street and necessitate a new traffic signal. DDOT concurs with these findings and notes that this mitigation will be the responsibility of the Applicant, as well as any additional warrant studies if desired by DDOT's Transportation Operations Administration. A new signal will not only address vehicular delay but will improve the quality and safety of pedestrian crossing for Howard students and DC citizens alike. The Applicant must install the signal in advance of opening the first of the two proposed Residential Halls.

BICYCLE AND PEDESTRIAN FACILITIES

The District of Columbia is committed to enhancing the walk-ability and bike-ability of the city by ensuring consistent investment in pedestrian and bike infrastructure on the part of both the public and private sectors. DDOT generally expects new developments to serve the needs of all trips they generate, including pedestrian and bicycle trips.

As discussed in many of DDOT's meetings with the Applicant, increased bicycling demand is expected to occur as a consequence of the Campus Plan and current trends in the District. DDOT has requested that Howard University install at least one Bikeshare station in the central campus in order to help meet this demand and connect with new activity centers and residential nodes where Bikeshare bicycles and docks have already been installed.

The TIS identifies three locations for possible Bikeshare stations – near the intersection of W Street and Georgia Avenue, the intersection of 4th and Bryant Streets, and the intersection of 6th Street and Howard Place. These locations are recommended because of their close proximity to activity centers, residential halls and proximity to the campus academic core. DDOT will work the Applicant to situate and install, at the expense of the University all at least one, and preferably three Bike share stations.

Furthermore, bicycle parking and storage demands will increase in conjunction with the new campus buildings and the growing number of bicycle trips. Existing parking is limited and the parking that is available does not comply with DDOT standards. The Applicant must comply

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with zoning standards for interior bicycle parking, and exterior parking racks (on the order of 20 spaces per building) at building entrances.

TRANSIT SERVICE

The District in cooperation with the Washington Metropolitan Transportation Authority (WMATA) has partnered to provide extensive public transit service in the District of Columbia. DDOT's vision is to leverage this investment to increase the share of non-automotive travel modes so that economic development opportunities increase with minimal infrastructure investment.

The site is well served by both local and regional public and private transit. The Shaw/Howard and U Street/Cardozo stations are about half a mile from the main campus providing access via the green line to Downtown and Prince George's County. Additionally, high frequency express and local bus service connect the site north into Maryland and south into downtown through Georgia Avenue/7th Street. Additional local service connects the site to other portions of the District. Transit accessibility and level of service to the site can be described as excellent.

PARKING

The overall parking demand created by the development is primarily a function of land use, development square footage, and price / supply of parking spaces. However in urban areas, other factors contribute to the demand for parking such as the availability of high quality transit, frequency of transit, and proximity to transit. With the Howard Campus location in such proximity to high quality transit, there is a tremendous opportunity to reduce demand for parking, and to limit vehicle trips, which are shown to create significant delay on area roadways, particularly Georgia Avenue.

The existing parking facilities at the Howard Central Campus are substantial and result in an oversupply of parking. The number of parking spaces currently attached to the Howard University campus, excluding Howard University Hospital, is 2,295 spaces spread over 36 facilities. Of those spaces, on average only 1,748 are used through the year. The proposed Campus Master Plan plans to reduce the number of available parking spaces to 1,400 by year 2021. This represents a reduction of supply of approximately 900 available spaces and a practical reduction of approximately 348 vehicles on site.

DDOT feels that a reduction of 348 or 20 % is insufficient to generate a dramatic change in the existing vehicle mode share. DDOT believes that parking demand for the Howard Campus could be significantly lower than 1,400 spaces. DDOT supports a reduction to 1100 spaces based upon the Applicant's TDM plan and expectations of mode splits. The existing parking facilities number does not include additional curb side metered parking along most of the streets that surround and crisscross the campus. The amount of curbside parking within the Campus Plan is sufficient to support any overflow parking needs which can be managed by meters.

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DDOT believes that reducing the on-site parking and combining that with managing curbside parking will help minimize the vehicle trip generation and delay associated with the site and the potential impacts to the area. DDOT would recommend that on-site parking be limited to a maximum of 1,100 spaces in order to minimize impacts of the project on safety and circulation in the vicinity of the project.

Interestingly, the majority of the student body is taking the Howard Shuttle Bus or walking to school with only 9% using private vehicle as a transportation mode. These numbers reflect that faculty and staff use most of the parking spaces currently available and, as such, opportunities for TDM and mode share goals can be focused on this group.

Given the on-site campus parking resources, DDOT does not anticipate a substantial problem of spillover pressure on public curbside parking in surrounding neighborhoods. However, DDOT understands that new development on Campus and a market based approach to private parking on could lead to increased demand on surrounding residential streets. The Applicant must conduct periodic reviews of impacts to residential parking and, as necessary, propose measures to manage curbsides in light of future conditions. If it is determined in conjunction with area stakeholders and DDOT that impacts to neighborhood parking is unacceptable, then it will be the responsibility of the Applicant to fund changes to curbside regulations and/or additional TDM measures.

STREETSCAPE / PUBLIC REALM

In line with District policy and practice, any substantial new building development or renovation is expected to rehabilitate streetscape infrastructure between the curb and the property lines. This includes curb & gutter, street trees and landscaping, street lights, sidewalks, and other appropriate features within the public rights of way bordering the site.

The Applicant must work closely with DDOT and OP to ensure that the design of the public realm meets current standards, and will substantially upgrade the appearance, functionality and safety of the streetscape for public users needing to access the property or circulate around it. Final decisions will be made on these elements through the Public Space Permitting process.

The *DDOT Public Realm Design Manual* will serve as the main public realm reference for the Applicant; and the *DDOT Design & Engineering Manual* will serve as the main reference for roadway design related to loading, access, and other typical interactions with public space. DDOT staff will be available to provide additional guidance.

In addition to meeting transportation needs, public rights of way also serve a critical role in storm water retention and expansion of tree canopy. This function must also be considered in street design and meet best management practices laid out in Green Streets literature and the *DDOT Standard Specifications for Highways and Structures* (Blue Book).

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TRANSPORTATION DEMAND MANAGEMENT 2012 DEC -4 PM 2:17

As part of all major development review cases, and in particular Campus Plan submissions, DDOT requires the Applicant to produce a Transportation Demand Management (TDM) Plan. TDM is a set of strategies, programs, services, and physical elements that influence travel behavior by mode, frequency, time, route, or trip length in order to help achieve highly efficient and sustainable use of transportation facilities. In the District, this typically means implementing infrastructure or programs to maximize the use of mass transit, bicycle and pedestrian facilities, and reduce single occupancy vehicle trips during peak periods.

The TDM is a critical component of the Howard University Campus Plan, as there is demonstrated need and significant opportunity to modify travel behavior and reduce car dependence on site. However, the Applicant did not submit its TDM plan until November 21, 2011, and DDOT has not had an adequate opportunity to discuss with the Applicant. DDOT appreciates the comprehensive nature of the plan, which thoroughly details existing conditions on campus, existing TDM strategies and proposed additional TDM strategies. DDOT supports the plan in principle, but would like to better understand what commitments the Applicant intends to make. Preliminary comments on specific items include:

- **TDM Culture:** The proposed TDM Coordinator should be required to meet regularly (at least annual y) with goDCgo staff. DDOT would like the Applicant to ensure that annual TDM monitoring reports are forwarded to DDOT.
- **Shuttle Service:** DDOT commends the extensive Howard University shuttle system that provides a valuable service to faculty, staff and primarily students. The University has committed to improve existing shuttles, including service to metro. DDOT would like to see what these planned improvements are and how it will impact mode split.
- **SmartBenefits:** According to the TDM Report, less than 6% of faculty and staff take advantage of the available SmartBenefits pre-tax program. This percentage is even less than the campus bus and rail mode split. DDOT would like to see a commitment to increasing the use of SmartBenefits that will result in a higher transit mode split for faculty and staff.
- **Parking Management:** DDOT fully support doubling the cost of annual faculty and staff parking permits from \$400 to \$800 for a reserved permit and from \$300 to \$600 for a non-reserved permit. DDOT suggests that this increase should be for all permits issued and not just at high-demand parking lots. Despite the fact that the drive alone rate for students is significantly less than for faculty and staff, DDOT also suggests considering raising the cost of parking permits for students. The current student rate translates to \$20 a month and at such a low cost, does little to discourage driving to campus. Additionally, as changes are being made to the parking program, this would be an ideal time to implement a carpool program which provides discounted or preferred parking to registered carpools.

- **Capital Bikeshare:** There are approximately 84 Capital Bikeshare stations scheduled to be installed in the District over the next 12-18 months. None of those stations are slated to be placed on Howard University Campus. With budget constraints it is unlikely that stations will be placed on campus without a financial commitment to Capital Bikeshare. DDOT suggests that the University fund new bikeshare stations on campus as well as subsidized memberships for students. Membership fees could be rolled into student fees. DDOT is willing to provide a discounted rate for Howard students, faculty, and staff.
- **Annual Monitoring and Reporting:** DDOT would like the Applicant to devise and commit to a clear set of monitoring and reporting tasks and targets related to TDM; not meeting these targets result in the implementation of additional TDM measures.

SAFETY

DDOT requires that the Applicant conduct a safety analysis to demonstrate that specific land developments will not create or exacerbate new or existing safety issues for all modes of travel. DDOT asks for an evaluation of crashes at intersections within the study area and an analysis of the public space in the immediate vicinity of the site. As further processing continues and specific projects approach final design and the public space permit process, DDOT expects the applicant to submit designs for the public space that address safety concerns. These plans will include design elements of the public realm that address site specific safety concerns. This includes and is not limited to:

- Reference to existing Highway Safety Improvement Reports within the Campus Plan including a brief analysis and end conclusion;
- Details (drawings: pavement marking and signage plans existing and proposed, site pictures, etc.) of proposed improvement, including an evaluation for the purpose of proposing engineering countermeasures intended to reduce crash occurrence, injury severity, property damage, as well as minimize conflicts between pedestrians and vehicles;
- Details of proposed safety improvements; transportation mobility, accessibility, and minimize traffic congestion;
- Descriptions of the location for each bus stop including a detailed analysis and site assessment and in conjunction with DDOT and WMATA, a plan for relocating any stops that have safety issues. For example - relocating the existing Mid-Block Bus stop, located between Euclid Street and Howard Place; and near side locations to far side locations for Georgia & Florida; Georgia and V.;
- Sight distance analysis - near-side and far-side parking restrictions, the trimming bushes, trees, and cutting vegetation, at the intersections adjacent to the Howard University Campus shall be done according to DDOT intersection sight distance standards (ISD);

- All existing driveways must be restored with new curb and gutter, tree space and sidewalk;
- All infrastructure including intersection wheelchair ramps must be upgraded to comply with current ADA guidelines.

CONCLUSION

In conclusion, based upon the careful evaluation of Howard University's Campus Plan application, DDOT supports the proposed developments on the Howard Central Campus. DDOT does expect the changes on campus to result in some impacts to the roadway network, which will require mitigation on the part of the Applicant. Adjustments to specific facilities include a new traffic signal at the intersection of College Street at 4th Street NW, and operational improvements on and around Georgia Avenue (in coordination with DDOT). The other mitigations are centered on reducing the overall vehicular trip generation through aggressive TDM actions. Many of these actions have been outlined in the body of this report, but require additional information from and interaction with the Applicant.

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EXHIBIT G

Geotechnical Engineering Study
Proposed Howard University Interdisciplinary Research Building
2201 Georgia Avenue NW
Washington, D C
Langan Project No 270023101

10 July 2012
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Laboratory testing of samples from the lower sand revealed a natural moisture content of 14 to 30 percent. Laboratory Atterberg Limits testing of a sample of the interbedded clay resulted in a liquid limit of 23, a plastic limit of 15, and a plasticity index of 8

5.7 Lower Clay

The lower clay stratum was encountered beneath the lower sand in boring LB-1 at a depth of 45 feet below existing grade, or at approximate el 61 The lower clay stratum extended to the boring termination depth of 55 feet, or to approximate el 51 The lower clay was gray and contained varying proportions of silt and fine sand and trace amounts of organics This stratum was found to be very stiff to hard as evidenced by SPT N_{60} -values ranging from 29 to 32 blows/foot (average SPT N_{60} -value of 30 blows/foot) Pocket penetrometer testing of disturbed samples from the lower clay stratum resulted in typical unconfined compressive strengths ranging from 2.5 to 4.25 tsf

5.8 Groundwater

Groundwater was first encountered in the borings at depths ranging from approximately 16 to 23 feet below existing grade, or at approximate el 81 to 88 The groundwater levels in the borings were determined based on the inferred moisture content of the soil samples obtained by the split spoon sampler

The groundwater level was measured at a depth of 25.4 feet below existing grade, or at approximate el 80.6 at the completion of drilling in boring LB-1 Groundwater was also measured to be 20.6 and 25.8 feet below existing grade, or at approximate el 83.4 and 78.2, in temporary groundwater sampling wells installed in borings LB-2 and LB-3, respectively

A groundwater level observation well was installed during the Howard University Master Plan Implementation investigation to a depth of 30 feet below grade on 16 August 2011 The well was installed in boring B-4-2, located east of the site in the parking lot of the former PFM building Water level measurements performed in the well are presented in the following table

Groundwater Readings via Monitoring Well in B-4-2			
Measurement Date	Depth (feet)	Elevation (feet)	Notes
16 August 2011	24.0	79.0	At completion of drilling
18 August 2011	16.3	86.7	2 days after well installation
1 September 2011	16.0	87.0	16 days after well installation
14 September 2011	16.7	86.3	29 days after well installation
16 September 2011	16.9	86.1	31 days after well installation
14 June 2012	16.1	86.9	303 days after well installation

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